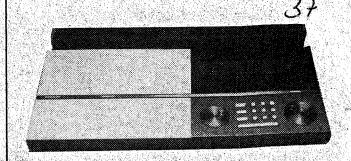
Beomaster 8000 TYPE 1901, 1903, 1905, 1907

Beolab Terminal







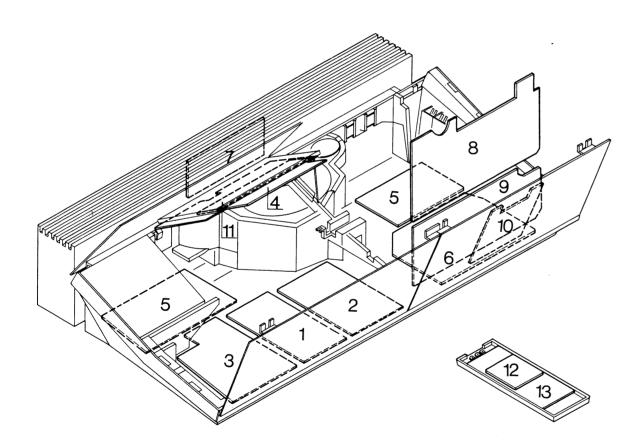
#### CONTENTS

<b>Circuit Diagrams</b>		1
	Diagram 1	1-3
	Diagram 2	1-4 1-5
	Diagram 3 Diagram 4	1-6
	Diagram 4	
	Explanation of diagram	1-2
	Measuring conditions diagrams	1-8
•	Function tables (for 9IC-2 and display)	1-7
	Survey of display pin connections	1-7 1-9
	Drawing of PC9 (Microcomputer)	1-9
Block Diagrams		2
		, 4
	Block diagram of power supply	2-1
	Block diagram of RF circuit	2-1
	Block diagram of AF circuit	2-2 2-3
	Block diagram of the operating system	<u></u>
Survey of Semi-		3
	하는 하는 사람들은 사람들이 되었다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은	·
	List of transistors	3-1
	List of IC's and PE's	3-2 3-4
Contract Contract	List of diodes	3-4
List of Electrical	Parts	4
	\$P\$\$P\$\$P\$100000000000000000000000000000	
List of Mechanic	al Parts	5
		5-2
그 등 이 사람	Main chassis, Secondary operating panel	5-4
	LF-output and Cooling tower	5-6
	Beolab Terminal	5-7
	Parts not shown	5-7
and was been	Cable survey	5-8
	Survey of packings for module transport	5-8
Guide to Adjustr	nents:	6
Galdo to Aujeon	그렇게 있는 사회에 대한테 바로 하는 방향이 하루 환경에 가는 하는 경우를 받고 있는 사람들은 사람들은 사람들이 가지 않고 있다.	
	No-load current	6-1
	Offset output amplifier	6-1 6-1
	Offset volume control	6-2
	Tuner and IF section	6-2
	FM-AF output	6-4
	AGC	6-4
	Signal strength meter	6-4
	Opening of otolog according to the second of	6-4 6-4
	Stereo decoder	6-5
	FM signal condition	6-5
	Resetting of microcomputer	6-6
	Display light	6-6
	Remote control receiver	6-6
Dismantling	andra de la compania de la compania Compania de la compania de la compa	7
	그 가게 하는 그는 그는 그들은 그는 그는 그를 하는 것이 하는 것이 되었다. 그는 그를 가장 하는 것이 되었다. 그는 그를 가장 하는 그는 그를 가장 하는 것이 없는 그를 가장 하는 것이다. 그를 가장 하는 것이다.	
Technical Data	્રેન નુકારન કે તરાવાર કરો તરાવાર કરવા કરતા કરે કે ફોલે કહેતું તે હોઈએન નાર્કે ક્લાફેન્ટ નોર્ટને તાર્જ કે તે તે તે જો જો જો જો છે. જો	8
-thousalles Too	어떤 가는 그네. 함께 유통했습니다. 하루팅 그네요. 그 그리고 모았다	9
*Insulation res		
Final Testing .	andria (1905) and and a significant an The control of the control of the control of the significant and the control of the control of the control of	10
4	그는 눈이 되는 것이 되었다. 그는 이 바다 사람이 많은 것이라고 하는 사회에 나를 보는 것이다.	
Service Tips and	d Modifications	11
	Method to locate fault in the FM tuning system	11-1
And Special Special Control of the Control	To be remembered when replacing 9IC6	11-2
**************************************	Re the »Spike Suppression« circuit on PC4	11-2
	Re PC9 (Microcomputer)	11-2 11-2
	Table of Input/Output levels Diag. 2 includes »Spike Suppression« circuit on PC4	11-5 11-5
	Diag. 3 includes the previous version of PC9	

1-1

1-2

1	FM diagr. 1	8	Display diagr.
2	FM Interface diagr. 1	9	Microcomputer diagr.
3	Preamplifier diagr. 2	10	Keyboard Primary diagr. 3
4	Filter and Tone Controls diagr. 1-2-3	11	Keyboard Secondary diagr. 3
5	Output Amplifier diagr. 2	12	Terminal Transmitter diagr. 4
6	Power Supply and Remote Receiver diagr. 4	13	Keyboard, Terminal diagr. 4
7	Starting Up Circuit diagr. 4		



### **Beomaster 8000** TYPE 1901, 1903, 1905, 1907

## **Beolab Terminal** TYPE 1002

#### **EXPLANATION OF DIAGRAM**

The diagrams have been drawn-up in such a way that in circuits with a RH and a LH channel, only the RH channel is shown.

### Printed components and co-ordinate system

Most of the PC-units have printed components on the print side as well as on the component side. In the diagrams all components are provided with position and co-ordinate numbers (the co-ordinate numbers being printed with smaller type than the position numbers). This means that from the diagram it is possible to identify a given component in a circuit in the correct PC-unit by means of these numbers.

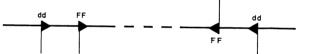
Any RH channel component in the diagram has a position number in the »number group 200«, while the corresponding LH component in the same PC-unit has its numbers in the »number group 100«. E.g. R203 (RH channel) will have the corresponding resistor indicated as R103.

Components which in the diagram have position numbers from 1 up to and including 99 are common for both channels.

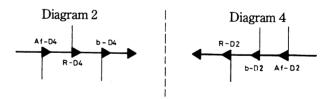
In the circuits which show the RH channel only, the co-ordinate numbers and the IC pin numbers for the LH channel are shown in brackets.

### Cable connections in the diagrams

Some of the cable connections in the diagrams are assembled in »bundles«. Each individual cable has its own code which tells to where it leads. Cables with two identical letters (either upper or lower case) tell that it is an internal connection in the same diagram.

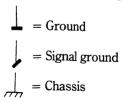


Cables which have connection to other diagrams are indicated by a letter (upper or lower case) or by a lower case and an upper case letter. In both cases a diagram (D) number is also indicated which tells to what diagram that cable is connected.



#### Grounding symbols

The following 3 grounding symbols are used in the diagrams:



NOTE: The signal voltages must be measured relative to signal ground in order to obtain a correct reading.

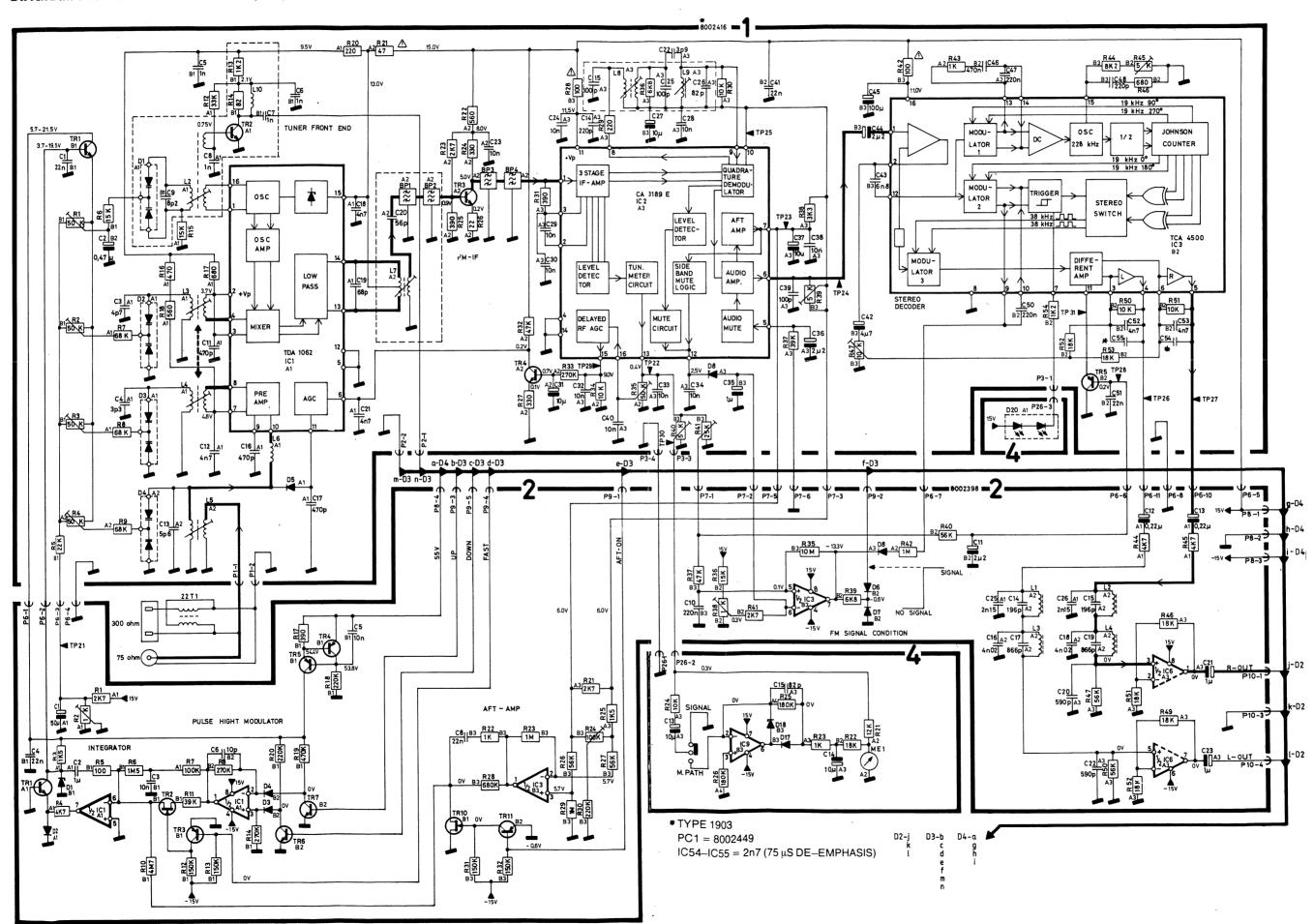
#### Signal paths

The signal paths are shown in the diagrams by semi-bold lines and arrow heads for FM, remote, and AF circuit respectively.

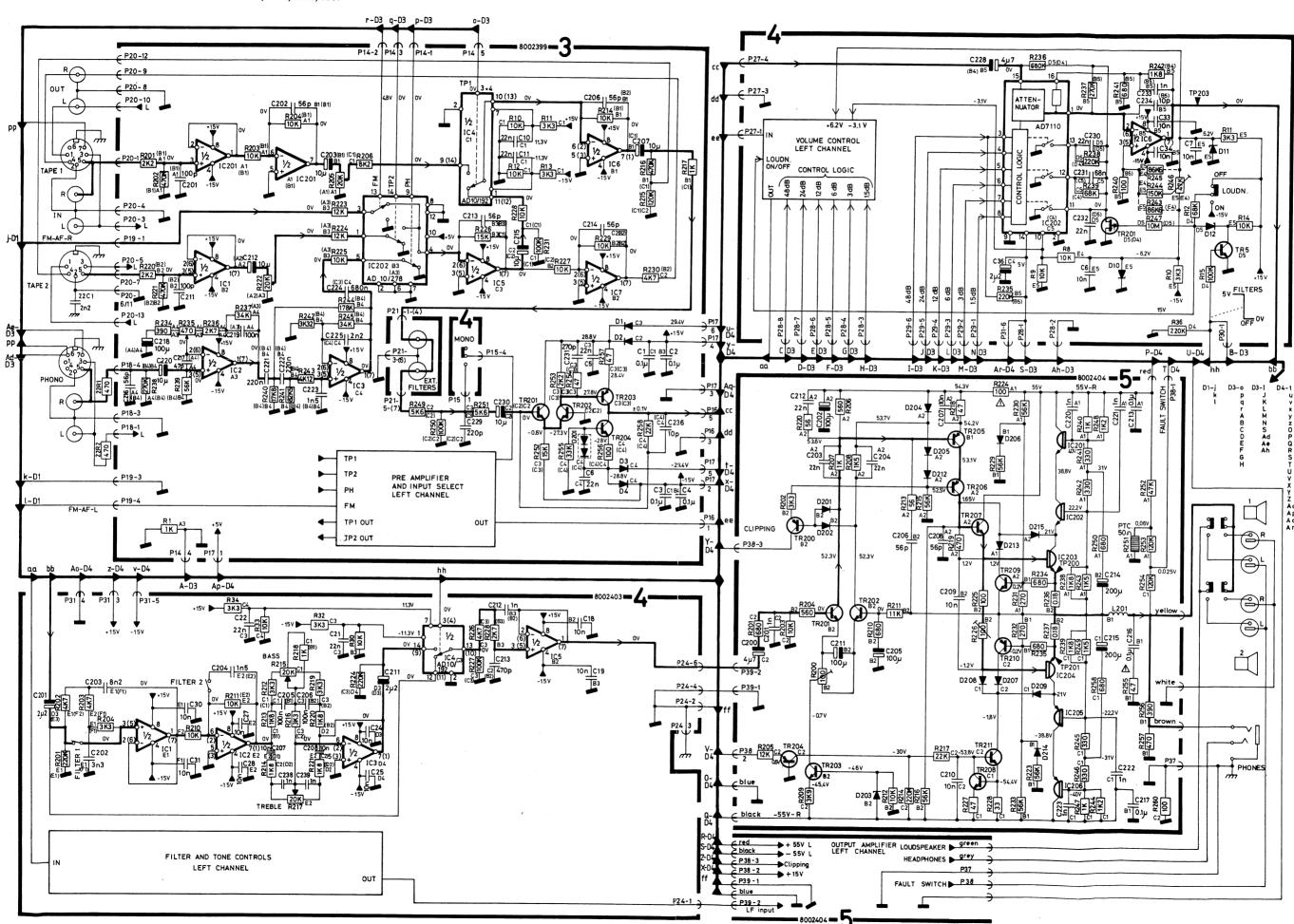
### MEASURING CONDITIONS FOR THE DIAGRAMS

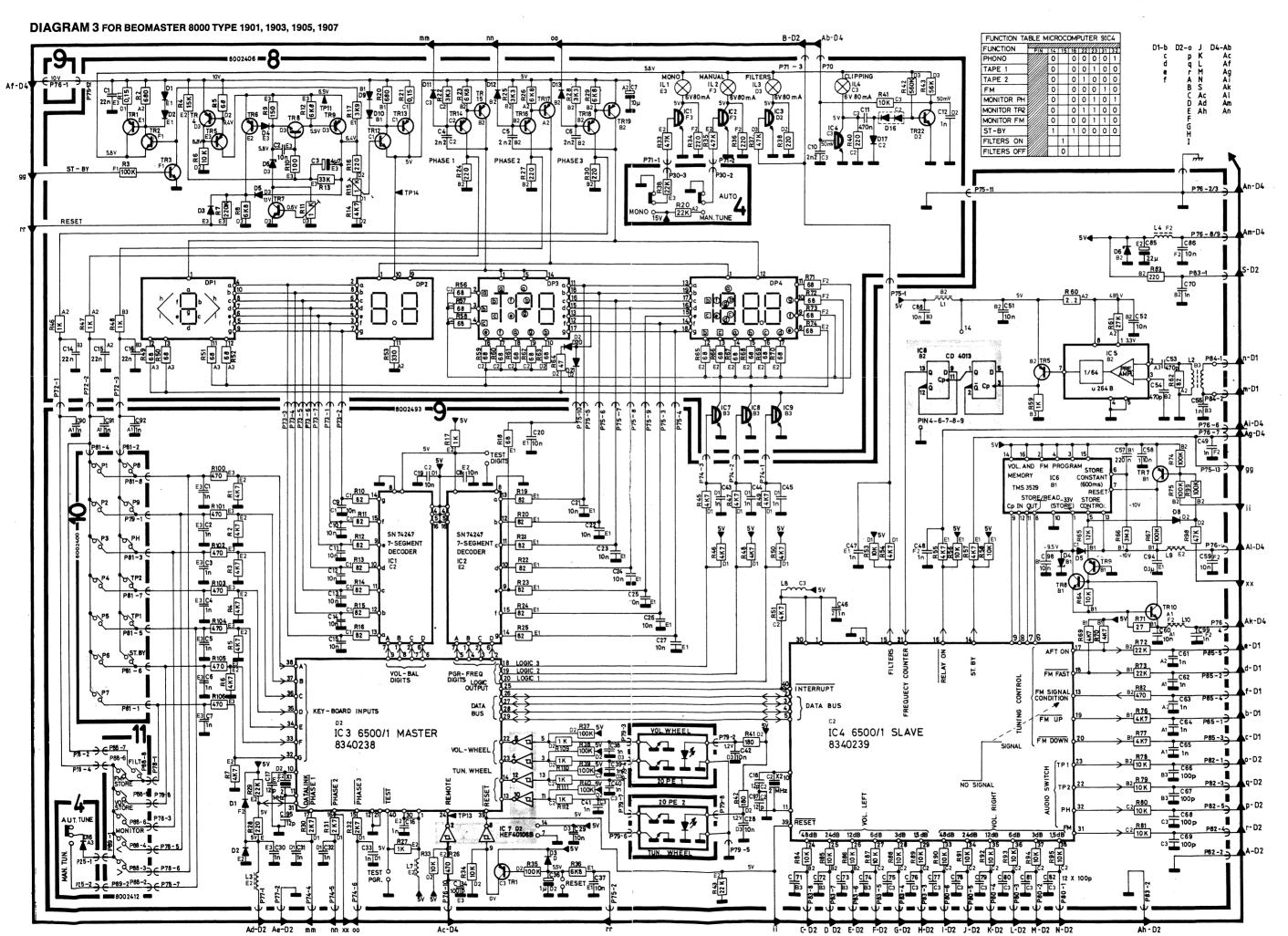
Measuring conditions for the diagrams, please see page 1-8

**DIAGRAM 1** FOR BEOMASTER 8000 TYPE 1901, 1903, 1905, 1907

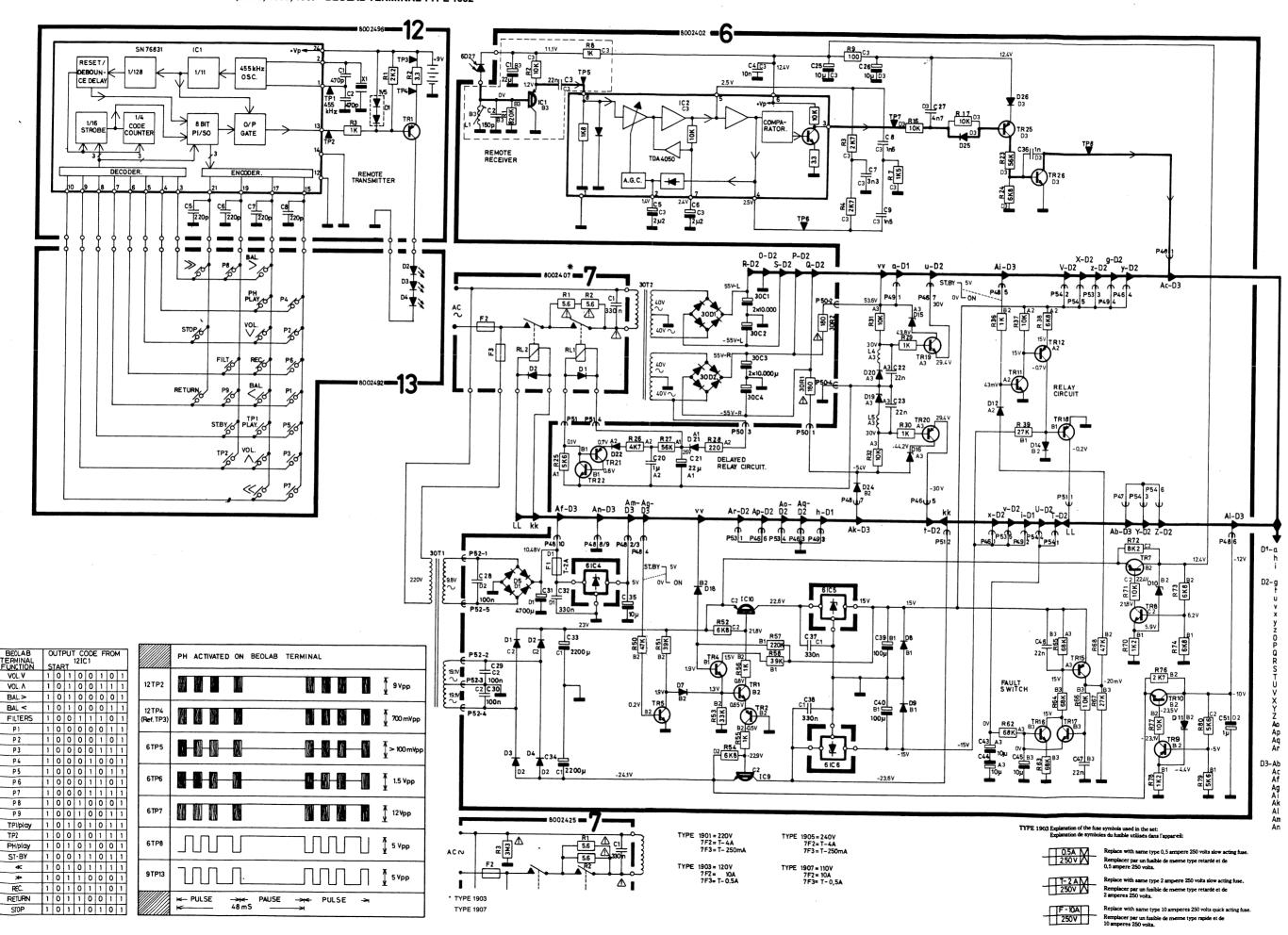


**DIAGRAM 2 FOR BEOMASTER 8000 TYPE 1901, 1903, 1905, 1907** 





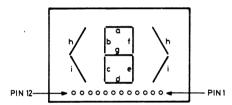
**DIAGRAM 4** FOR BEOMASTER 8000 TYPE 1901, 1903, 1905, 1907 - BEOLAB TERMINAL TYPE 1002



Funktionsskemaer og oversigt over benforbindelser på displays (Tilhører diagram 3)

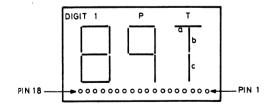
Function tables and survey of display pin connections (Refer to diagram 3)

FUNC TI	Ε	910	C1-	2	SN	742	47)				
DE CIMAL		NPU	JTS		OUTPUTS						
ON DISPLAY	٥	С	В	Α	σ	b	С	d	е	f	g
. 0	0	0	0	0	0	0	0	0	0	0	1
: 1	0	0	0	1	1	0	0	1	1	1	1
2	0	0	1	0	0	0	1	0	0	1	0
3	0	0	1	1	0	0	0	0	1	1	0
. 4	0	1	0	0	1	0	0	1	1	0	0
· 5	0	1	0	1	0	1	0	0	1	0	0
. 6	0	1	1	0	0	1	0	0	0	0	0
7	0	1	1	1	0	0	0	1	1	1	1
8	1	0	0	0	0	0	0	0	0	0	0
9	1	0	0	1	0	0	0	0	1	0	0
OFF	1	1	1	1	1	1	1	1	1	1	1



#### 8DP1 PIN ASSIGNMENT (BOTTOM WIEW)

- COMMON ANODE
- 2 CATHODE LEFT ARROW SEG. 1
- CATHODE LEFT ARROW SEG. i
- CATHODE SEG. a CATHODE SEG. f
- CATHODE SEG. e
- CATHODE SEG. d
- CATHODE SEG. c
- 9. CATHODE SEG. g 10. CATHODE SEG. b
- 11. CATHODE RIGHT ARROW SEG. h
- 12. CATHODE RIGHT ARROW SEG. i

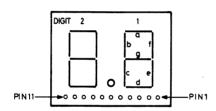


#### **8DP3 PIN ASSIGNMENT**

- (BOTTOM WIEW)
  COMMON ANODE DIGIT T
- SEG. a CATHODE DIGIT T
- SEG. b CATHODE DIGIT T
- SEG c CATHODE DIGIT T
- COMMON ANODE DIGIT P
- SEG. e CATHODE DIGIT P SEG. f CATHODE DIGIT P
- SEG. a CATHODE DIGIT P
- 9. SEG. g CATHODE DIGIT P 10. SEG. b CATHODE DIGIT P
- 11. SEG. a CATHODE DIGIT 1 12. SEG. f CATHODE DIGIT 1
- 13. SEG. e CATHODE DIGIT 1
- 14. COMMON ANODE DIGIT 1 15. SEG. d CATHODE DIGIT 1
- 16. SEG. c CATHODE DIGIT 1
- 17. SEG. g CATHODE DIGIT 1 18. SEG. b CATHODE DIGIT 1

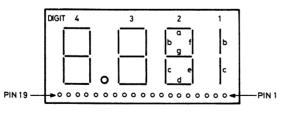
### Bang&Olufsen

		FUI	NCT	ION	TABLE	DISP	LAY	,			
	9	IC3	3				9	IC:	3		
PIN	15	16	17				18	19	20		
	3	2	-				3	2	-		
	PHASE	PHASE	PHASE				LOGIC	LOGIC	LOGIC	9IC1	91C2
			0	9 DF	3	Н			1		
			0	9 DP	,3	ρ		1			
			0	9DP	3	- T	1				
		0		FM	10MHz	8			1		
		0		FM	10MHz	8		1			
		0			10MHz		1				
		0		9DP	4, decin	nal point	1				
	0			9DP	1	<			1		
	0			9 DF	21	>		1			
	0			FM	100MH:	z i	1				
			0		LS 0.1					*	
		0			MS 1.0					*	
	0			BAL	ANCE	8				*	
			0	PGR	R. No.	8					*
		0			0.1MHz						*
	0				1.0 MHz						*
*	SE	Ε	FU	NCTI	ON TAB	LE FO	R S	91C	1-2		



#### 8DP2 PIN ASSIGNMENT

- COMMON ANODE DIGIT 1
- COMMON CATHODE SEG. a DIGIT 1 & 2
- COMMON CATHODE SEG. f DIGIT 1 & 2 COMMON CATHODE SEG. e DIGIT 1 & 2
- COMMON CATHODE SEG. d DIGIT 1 & 2
- COMMON CATHODE SEG. c DIGIT 1 & 2
- COMMON CATHODE SEG. g DIGIT 1 & 2
- COMMON CATHODE SEG. b DIGIT 1 & 2
- COMMON ANODE DIGIT 2
- 10. ANODE DECIMAL POINT 11. CATHODE DECIMAL POINT



#### 8DP4 PIN ASSIGNMENT (BOTTOM WIEW)

- COMMON ANODE DIGIT 1 & 3
- CATHODE SEG. b DIGIT 1
- CATHODE SEG. c DIGIT 1
- CATHODE SEG. a DIGIT 2
- CATHODE SEG. b DIGIT 2 CATHODE SEG. c DIGIT 2
- CATHODE SEG. d DIGIT 2
- CATHODE SEG. e DIGIT 2
   CATHODE SEG. f DIGIT 2
- 10. CATHODE SEG. g DIGIT 2 11. CATHODE DECIMAL POINT
- 12. COMMON ANODE DIGIT 2 & 4 & DECIMAL POINT
- 13. CATHODE SEG a DIGIT 3 & 4
- 14. CATHODE SEG. f DIGIT 3 & 4
- 15. CATHODE SEG. e DIGIT 3 & 4 16. CATHODE SEG. d DIGIT 3 & 4
- 17. CATHODE SEG. c DIGIT 3 & 4
- 18. CATHODE SEG. g DIGIT 3 & 4
- 19. CATHODE SEG. b DIGIT 3 & 4

### **MÅLEBETINGELSER FOR** DIAGRAMMER

Alle DC spændinger er målt i forhold til stel med et voltmeter med en indre modstand på mindst 10 Mohm. Spændingerne er målt uden signal tilsluttet modtageren.

Signalspændinger er målt i forhold til signalstel for at opnå korrekt resultat (se stelsymbolet under afsnittet »stelsymboler « side 1-2).

Bang&Olufsen

Oscillogrammer i fjernbetjeningsmodtageren (remote receiver) er målt med et signal fra Beolab terminalen, afgivet i ca. 0,5 m afstand.

Mekaniske omskiftere er vist i neutral stilling.

#### SYMBOL FOR SIKKERHEDSMODSTANDE



MEASURING CONDITIONS **DIAGRAMS** 

Ved udskiftning af komponenter med dette symbol skal der anvendes samme type, samt samme værdier for ohm og watt. Den nye komponent skal monteres på samme måde som den udskiftede.

All DC voltages are measured relative to ground with a voltmeter with an inherent resistance of 10 Mohm. The voltages are measured with no signal connected to the receiver.

The signal voltages are measured relative to signal ground in order to obtain a correct reading (see ground symbol in the section »Ground signals «, page 1-2).

Oscillograms in the remote receiver are measured with a signal from the Beolab terminal, transmitted at a distance of approx. 0.5 m.

Mechanical switches are shown in their neutral positions.

#### SYMBOL FOR SAFETY RESISTORS



### MEßBEDINGUNGEN FÜR DIE **SCHALTBILDER**

When replacing components with this symbol the same type has to be used, also the same values for ohm and watt. The new component is to be mounted in the same way as the replaced one.

Alle DC-Spannungen sind im Verhältnis zu Masse und mit einem Voltmeter mit einem inneren Widerstand von mindestens 10 MOhm gemessen. Die Spannungen sind ohne an den Empfänger angeschlossenes Signal gemessen.

Signalspannungen sind im Verhältnis zu Signal-Masse zur Erzielung des korrekten Ergebnisses gemessen (siehe Masse-Symbol unter dem Abschnitt »Masse-Symbole«, Seite 1-2).

Oszillogramme im Fernbedienungsempfänger (Remote Receiver) sind mit einem vom Fernbedienungssender Beolab Terminal kommenden und in einem Abstand von ca. 0,5 m abgegebenen Signal gemessen.

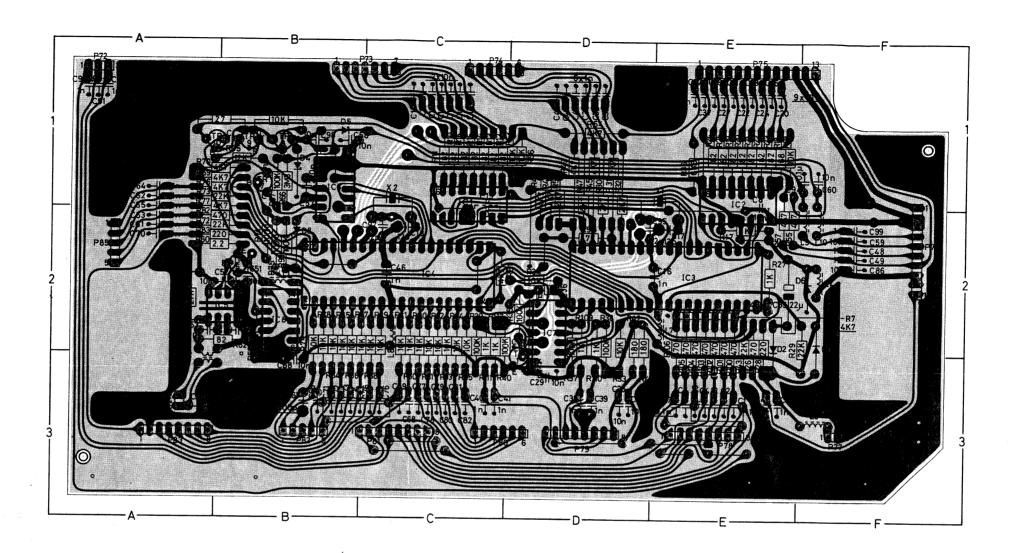
Mechanische Umschalter sind in neutraller Stellung gezeigt.

#### SYMBOL FÜR SICHERHEITS-WIDERSTÄNDE



### Beim Austausch von Komponenten mit diesem Symbol sind Komponenten desgleichen Typs und mit den gleichen Ohm- und Watt-Werten zu benutzen. Die neuen Komponenten sind in derselben Weise zu montieren wie die ausgetauschten Komponenten.

PC9, 8002493 Microcomputer



PC-pladen er vist fra komponentsiden

The PC board is shown from the component side

Printplatte von der Bauteilseite ausgesehen.

### 2-1

#### **BLOKDIAGRAMMER**

I dette afsnit er der vist nogle blokdiagrammer til hjælp ved blokfejlfinding i modtageren.

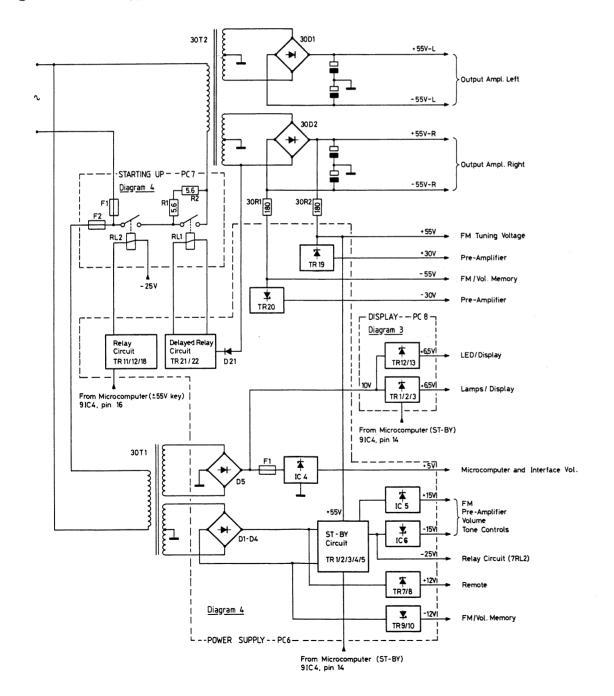
Ønskes der en forklaring af de enkelte kredsløbs virkemåde, henvises til teknisk produktinformation for Beomaster 8000, Beolab terminal.

#### **BLOCK DIAGRAMS**

In this section some block diagrams are shown to facilitate block fault finding in the receiver.

If further information as to the functions of the individual circuits is required, reference is made to the Technical Product Information for Beomaster 8000, Beolab terminal.

### **Block diagram of Power Supply**



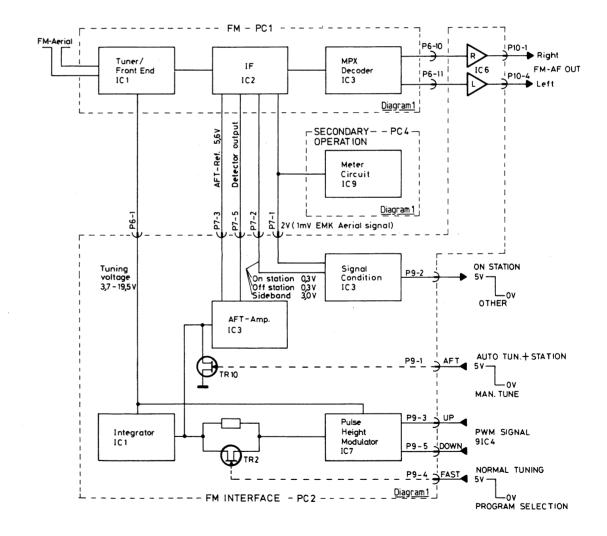
### Bang&Olufsen

#### BLOCKSCHALTBILDER

In diesem Abschnitt sind einige Blockschaltbilder gezeigt, die bei einer Blockfehlersuche im Empfänger helfen sollen.

Ist eine Erläuterung zu der Funktionsweise der einzelnen Schaltkreise erwünscht, so verweisen wir auf die »Technische Produkt-Information« für Beomaster 8000, Beolab Terminal.

### Block diagram of RF circuit



Blokdiagram over LF-delen

Blokdiagrammet viser højre kanal. Stikforbindelserne for venstre kanal er angivet i parentes.

De angivne signalspændinger (mV) er målt med indgangspotentiometrene og volumen reguleringen indstillet til maksimum og med 1W udgangseffekt i 8 ohm (1 kHz).

Block diagram of AF circuit

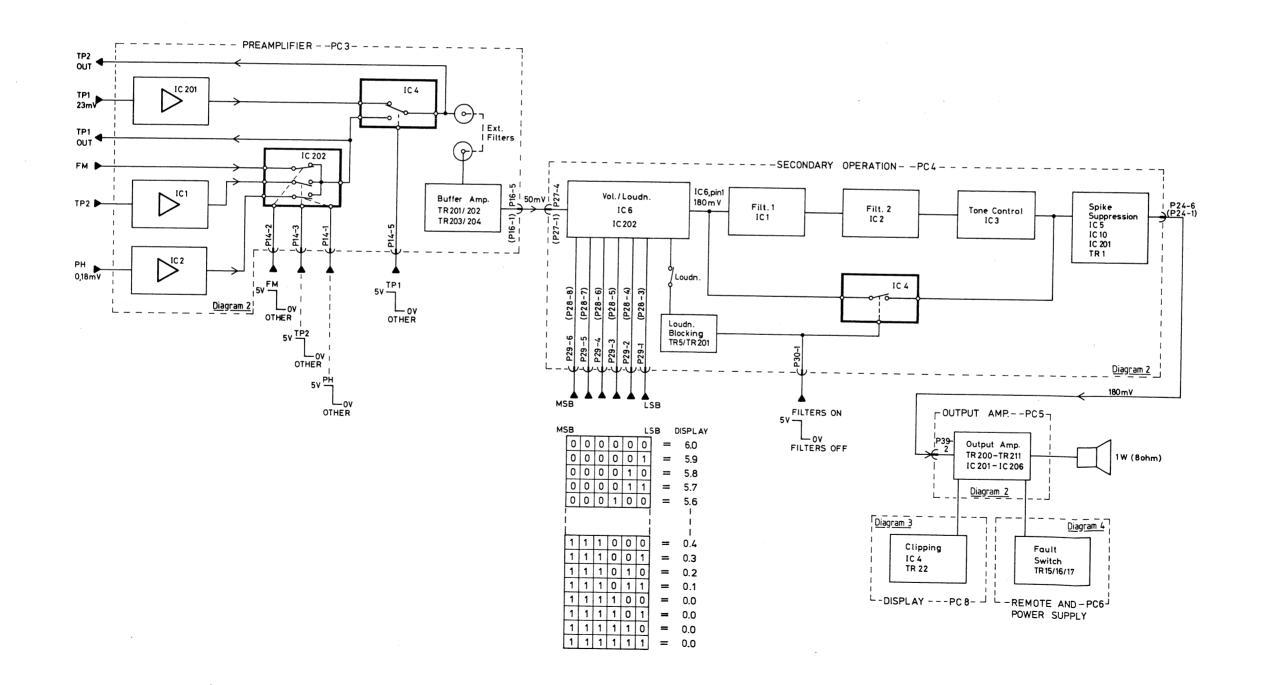
The block diagram shows the RH channel. The plug connections for the LH channel are shown in brackets.

The stated signal voltages (mV) are measured with input potentiometers in maximum, volume in maximum and with 1 W output power into 8 ohm (1 kHz).

Blockschaltbild für das NF-Teil

Das Blockschaltbild zeigt den rechten Kanal. Die Steckverbindungen für den linken Kanal sind in Klammern angegeben.

Die angegebenen Signalspannungen (mV) sind mit den Eingangspotentiometern und der Lautstärkeregelung in Maximalstellung und bei 1W Ausgangsleistung in 8 Ohm (1 kHz) gemessen.



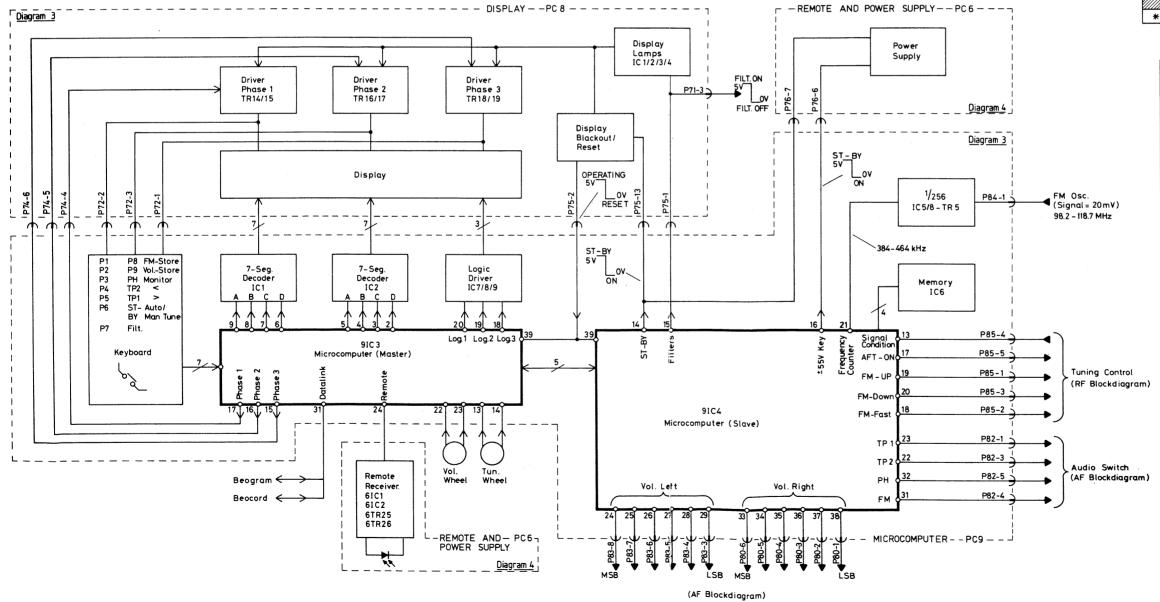
Blokdiagram over betjeningssystemet De viste funktionsskemaer har relation til microcomputeren (9IC3, 9IC4) og display-dekoderen (9IC1, 9IC2).

Block diagram of the operating system

The functional tables shown are relative to the microcomputer (9IC3, 9IC4) and the display decoder (9IC1, 9IC2).

Blockschaltbild für das Bedienungssystem Die gezeigten Funktionsschemas beziehen sich auf den Mikrocomputer (9IC3, 9IC4) und den Display-Decoder (9IC1, 9IC2).

FUNCTION TABLE						C1-	2	(SN	742	47)	
DE CIMAL	INPUTS			OUTPUTS							
ON DISPLAY	D	С	В	Α	a	Ь	С	d	e	f	g
0	0	0	0	0	0	0	0	0	0	0	1
1	0	0	0	1	1	0	0	1	1	1	1
2	0	0	1	0	0	0	1	0	0	1	0
3	0	0	1	1	0	0	0	0	1	1	0
4	0	1	0	0	1	0	0	1	1	0	0
5	0	1	0	1	0	1	0	0	1	0	0
6	0	1	1	0	0	1	0	0	0	0	0
7	0	1	1	1	0	0	0	1	1	1	1
8	1	0	0	0	0	0	0	0	0	0	0
9	1	0	0	1	0	0	0	0	1	0	0
0FF	1	1	1	1	1	1	1	1	1	1	1



	FUNCTION TABLE DISPLAY											
	9	IC3	}			9	IÇ:	3				
PIN	15	16	17			18	19	20				
	3	2				3	7	-				
	R	SE	SE			$\overline{c}$	ပ္	ي	_	7		
	PHASE	PHASE	PHASE			J190 <sup>-</sup>	70GIC	LOGIC	2	9IC2		
		_	0	9 DP3	<i>//////</i> ⊟	_	-	1	, 	0,		
		-	0	9 DP 3	ρ	_	1					
			0	9DP3	T	1		٦,	T			
		0		FM 10MHz	8			1				
		0		FM 10MHz	8		1					
		0		FM 10MHz	8	1						
		0		9DP4, decin	nal point	1						
	0			9DP1	<			1				
	0			9DP1	>.		1					
	0			FM 100MH	z l	1						
			0	VOL. LS 0.1	8				*			
		0		VOL. MS 1.0				_	*			
	0			BALANCE	8	L.			*			
			0	PGR. No.	8			_		*		
		0		FM 0.1MHz						*		
	0			FM 1.0 MHz						*		
*	SE	Ε	FU	NCTION TAB	LE FO	R	9IC	1-2				

FUNCTION TABLE MICROCOMPUTER 9IC4										
FUNCTION	PIN	14	15	16	22	23	31	32		
PHONO		0		0	0	0	0	1		
TAPE 1		0		0	0	1	0	0		
TAPE 2		0		0	1	0	0	0		
FM		0		0	0	0	1	0		
MONITOR PH		0		0	0	1	0	1		
MONITOR TP2		0		0	1	1	0	0		
MONITOR FM		0		0	0	1	1	0		
ST-BY		1		1	0	0	0	0		
FILTERS ON			1							
FILTERS OFF			0							

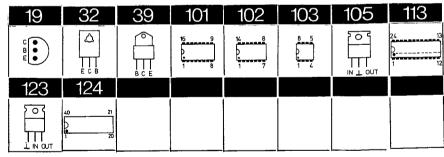
LIST OF TRANSISTORS

1/	19	20	J	24	31	32	42	43
B C E	C B E	E C	В	G S D	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	△ ∏ E C B	B C	F C B
1TR1	832028	5 <b>20</b>	ВС	548C	5TR207	8320	460 <b>43</b>	BF 857 BD 849
1TR2	832028	1 42	BF	199			+3	DD 049
1TR3		·			5TR208	8320	383 <b>32</b>	BD 135
			<del></del>				32	BD 165S
1TR4	832010	8 <b>20</b>	ВС	548B		9300	108 20	BC 548B
1TR5	832010	4 20	BC	558B	5TR209	6320	100 20	DO 340D
7,110					5TR210	8320	104 <b>20</b>	BC 558B
2TR1	832010	8 <b>20</b>	ВС	548B				
	200000	C 04	ON 1	F600	5TR211	8320	460 <b>43</b> <b>43</b>	BF 857 BD 849
2TR2	832039	24		5639 °F 4392			43	DD 049
				1 4002	6TR1	8320	097 <b>20</b>	BC 547B
2TR3	832010	4 20	вс	558B				
					6TR2	8320	152 <b>20</b>	BC 557B
2TR4	832024	2 <b>20</b>	ВС	556B	6TR4	8320	097 <b>20</b>	BC 547B
2TR5					6TR5			
2TR6	832010	8 <b>20</b>	ВС	548B				
2TR7					6TR7	8320	316 <b>20</b>	BC 327-25
2TR10	832039	6 24	2N	5639	6TR8	8320	097 <b>20</b>	BC 547B
		24	MF	F 4392				
					6TR9	8320	104 20	BC 558B
2TR11	832010	4 20	BC	558B	6TR10	8320	295 <b>20</b>	BC 337-25
3TR101/201	832034	4 20	ВС	550B				
3TR102/202					6TR11	8320	097 <b>20</b>	BC 547B
					CTD10	9300	104 00	DC 559B
3TR103/203	832036	5 <b>19</b>	MF	PS-H54	6TR12	8320	104 20	BC 558B
3TR104/204	832023	7 <b>20</b>	ВС	546B	6TR15	8320	104 <b>20</b>	BC 558B
4TR1	832010	8 <b>20</b>	вс	548B	6TR16	8320	097 <b>20</b>	BC 547B
4TR5					6TR17			
ATD101/001	022022	6 24	ONI	5630	6TR18	RSOC	152 <b>20</b>	BC 557B
4TR101/201	832039	24		5639 PF 4392	VINIO	0020	.02 20	20 30. 5
					6TR19	8320	295 <b>20</b>	BC 337-25
5TR200	832036	5 <b>19</b>	MF	PS-H54				
	000011	0.00		. 5465	6TR20	8320	316 20	BC 327-25
5TR201- 5TR203	832040	9 20	RC	546B	6TR21	8320	152 20	BC 557B
J111200					<u> </u>	3020	<b></b>	
5TR204	832040	8 <b>20</b>	ВС	556B	6TR22	8320	295 <b>20</b>	BC 337-25
5TR205	832010	4 20	ВС	558B	6TR25	8320	104 20	BC 558B
5TR206	832045	4 17	BF	423	6TR26	8320	0097 <b>20</b>	BC 547B

17	19	20	24	31	32	42	43
B C E	C	E B	G S D	3 O C	△ ∏ E C B	B E	FC B

8TR1	8320369 <b>31</b> BD 534	4 8T	R17	8320450	17	BC 369
8TR2	8320108 <b>20</b> BC 548	8B 8T	R18 8	8320104	20_	BC 558B
8TR3						
		8T	R19 8	8320450	17	BC 369
8TR4-	8320104 <b>20</b> BC 558	8B				
8TR6		8T	R22 8	8320108	20	BC 548B
8TR7	8320108 <b>20</b> BC 548	BB 9T	'R1 8	B320104	20	BC 558B
BTR8	8320097 <b>20</b> BC 547	7B 9T	'R5 8	8320104	20	BC 558B
BTR9	8320104 <b>20</b> BC 558	BB 9T	'R7 8	8320104	20	BC 558B
BTR12	8320108 <b>20</b> BC 548	3B 9T	'R8 8	8320323	19	MPS-A05
BTR13	8320369 <b>31</b> BD 534	4 9T	R9 8	8320242	20_	BC 556B
BTR14	8320104 <b>20</b> BC 558	3B 9T	R10 8	8320108	20	BC 548B
BTR15	8320450 17 BC 369	9 12	TR1 8	8320331	20	BC 328-
						25/18
BTR16	8320104 <b>20</b> BC 558	BB				

LIST OF IC's AND PE's



1IC1	8340198 <b>101</b> TD	A 1062 3IC1	· 8340195 <b>103</b> LF 353N
			103 TL 072CP
1IC2	8340233 <b>101</b> CA	3189E	<b>103</b> μAF 772T0
1IC3	8340292 <b>101</b> TC	A 4500 3IC2	8340250 <b>103</b> NE 5532N
2IC1	8340195 <b>103</b> LF	353N 3IC3	8340224 <b>103</b> TL 072CP
	103 TL	072CP	
	<b>103</b> μΑ	F 772TC 3IC4	8340227 <b>102</b> AD 10-192
2IC3	8340195 <b>103</b> LF	353N 3IC5-	8340195 <b>103</b> LF 353N
	103 TL	072CP 3IC7	103 TL 072CP
	<b>103</b> μΑ	F 772TC	<b>103</b> μAF 772T0
2IC6	8340195 <b>103</b> LF	353N 3IC10	1/201 8340195 <b>103</b> LF 353N
	103 TL	072CP	103 TL 072CP
	<b>103</b> μA	F 772TC	<b>103</b> μAF 772T

3lC102/202	8340248 102	AD 10-278	9IC1-	8340156	101	SN 74247N
			9IC2			
4IC1-	8340195 <b>10</b> 3	LF 353N				
4IC3	103	TL 072CP	9IC3	8340238	124	6500/1
	103	μAF 772TC				MASTER
4IC4	8340227 <b>102</b>	AD 10-192	9IC4	8340239	124	6500/1
						SLAVE
4IC5	8340224 103	TL 072CP				
			9IC5	8340220	103	μ 264B
4IC6	8340251 <b>103</b>	TL 072 Spec				
4100	5510251 100		9IC6	8340225	101	TMS 3529
4IC9	8340141 <b>10</b> 3	LM 741CN				
4103		μA 741CP	9IC7	8340221	102	HEF 40106B
		μΑ 741CN	<u> </u>			
		SFC 2741DC	9IC8	8340261	102	HEF 4013BP
	100	310274100	5100	0010201		F4013
41040	0040105 100	L E 252N				7 10 10
4IC10	8340195 <b>103</b>		12IC1	93/0101	112	SN 76831
-		TL 072CP	12101	0040191	110	M-24
	103	μAF 772TC				101-2-4
	222227	051144 50	20DE1	8330041		Opto-
4IC101/201	8330027	GE H 11-F3	20PE1	6330041		
			20PE2			coupler
4IC102/202	8340226 <b>10</b> 1	AD 7110				
				<u> </u>		
5IC201-	8340042 <b>39</b>	TIP 141		<u> </u>		
5IC203					-	
5IC204-	8340041 <b>39</b>	TIP 146				
5IC206	<del> </del>					
6IC1	8340025 <b>19</b>	SPS 5431				
	19	MPSA 65				
6IC2	8340193 <b>10</b> 3	TDA 4050				
6IC4	8340065 <b>105</b>	LM 7805				
	105	μΑ 7805				
	105	MC 7805				
6IC5	8340208 105	MC 78M15				
	105	μΑ 78M15				· · · · · · · · · · · · · · · · · · ·
6IC6	8340222 <b>12</b> 3	μΑ 79M15				
			_			
6IC9	8340282 <b>32</b>	BD 676		:		
6IC10	8340184 <b>32</b>	BD 675				
8IC1-	8340054 <b>19</b>	SPS 5418				
8IC4	19	MPSA 13				
<u> </u>	19	TPSA 13				
-				•		
8IC7-	8340054 <b>19</b>	SPS 5418				
8IC9	19	MPSA 13				
5103	19	TPSA 13				
	13	11 0/10				

### LIST OF DIODES AND DISPLAYS

203	209	215	217	222	226	
C	<u> </u>	<u>*</u>	A C	A <sub>2</sub> K A <sub>1</sub>	I C	

LL							
1D1-	8300308	222	BB204 Blue	4D18	8300036	209	ZPD 4.7V
1D4						209	BZX 79
							C4V7
1D5	8300306	226	BA 479			209	BZX 83
							C4V7
1D8	8300135	209	ZPD 3.3				
		209	BZX 79	4D20	8330030		MV 57173
			C3V3				
		209	BZX 83	5D201	8300058	217	SFD 184
			C3V3	5D202		215	1N 4148
						209	1N 4148
2D1	8300033	209	ZPD 22V				
		209	BZX 79	5D203	8300028	209	ZPD 9.1V
			C22V0			209	BZX 79
		209	BZX 83				C9V1
			C22V0			209	BZX 83
							C9V1
2D2-	8300058	217	SFD 184				
2D8	<u> </u>	215	1N 4148	5D204-	8300058	217	SFD 184
		209	1N 4148	5D209		215	1N 4148
						209	1N 4148
3D1-	8300058	217	SFD 184				
3D4		215	1N 4148	5D212-	8300058	217	SFD 184
		209	1N 4148	5D215		215	1N 4148
						209	1N 4148
3D101/201	8300056	209	ZTE 1.5				
				6D1-	8300023	209	1N4002
\$D1-	8300058	217	SFD 184	6D4			
1D4		215	1N 4148				
		209	1N 4148	6D5	8300297		B80 C3700
<del>,</del>	······						2200
1D5	8300142	209	AA 143				
‡D6				6D7	8300058	217	SFD 184
						215	1N 4148
ID10	8300201	209	ZPD 6.2V	-		209	1N 4148
D11		209	BZX 79				
			C6V2	6D8	8300023	209	1N 4002
		209	BZX 83	6D9			
			C6V2				·····
				6D10	8300154	209	ZPD 6.8V
ID12	8300326			-78		209	BZX 79
			BZX83				C6V8
			C11V0			209	BZX 83
		209	BZX79		· · · · · · · · · · · · · · · · · · ·		C6V8
			C11V0				
	···			6D11	8300296	209	ZPD 5.6V2
ID16	8300058	217	SFD 184			209	BZX 83
10.47			1N 4148	-			B5V6
1017							D 7 V 70
1D17		209	1N 4148			209	BZX 79

6D12	8300058 <b>217</b>	SFD 184	8D20	8300058	217	SFD 184
6D14	215	1N 4148	8D21		215	1N 4148
	209	1N 4148			209	1N 4148
 SD15	8300028 209	7PD 9 1V	8DP1	8330016		FNA 8199
		BZX 79	<u> </u>			
SD16	209	C9V1	8DP2	8330015		FNA 8299
	200	BZX 83	0012	00000.0		
	209	C9V1	8DP3	8330013		FNA 8399
		Cavi	ODF 3	0000010		11010000
6D18	8300058 217	SFD 184	8DP4	8330012		FNA 8398
	215	1N 4148				
	209	1N 4148	9D1-	8300058	217	SFD 184
			9D3		215	1N 4148
6D19	8300210 <b>209</b>	ZPD 30V			209	1N 4148
6D20		BZX 83				
<u> </u>		C30V0	9D4	8300248	209	ZTK 33
	209	BZX 79			209	TDA 1550
	203	C30V0				
		00010	9D5	8300058	217	SFD 184
0001	0200100 000	1111004	000			1N 4148
6D21	8300102 <b>209</b>	1114004				1N 4148
					203	114 4 140
6D22	8300058 217		000	8300201	200	7DD 6 2V
		1N 4148	9D6			
	209	1N 4148			209	BZX 79
						C6V2
6D24-	8300058 217	SFD 184			209	BZX 83
6D26	215	1N 4148				C6V2
	209	1N 4148				
			9D8	8300058	217	SFD 184
6D27	6250105	IR SENSOR			215	1N 4148
					209	1N 4148
7D1	8300058 217	SFD 184				
7D2	215	1N 4148	12D1	8300056	209	ZTE 1.5V
	209	1N 4148				10%
		055 404	1000	0000000	000	LD 071
8D1-	8300058 217		13D2-	8330022		
8D5		1N 4148 1N 4148	13D4		203	V-290-P
	203	1114140	30D1	8300323		KB 62-B
8D6	8300036 209	ZPD 4.7V	30D2			125/110-2
		BZX 79				
		C4V7				
<del></del>	200	BZX 83				
	209	C4V7				
		<u> </u>				
8D9-	8300058 <b>217</b>	SFD 184				
8D13	215	1N 4148				
	209	1N 4148				
8D16	8300056 <b>209</b>	ZTE 1.5				
8D17	8300058 217		<del> </del>			
	215	1N 4148				
	209	1N 4148				
				· · · · · · · · · · · · · · · · · · ·		

### 4-1

LIST OF ELECTRICAL PARTS
PC1, 8002416 FM
(Type 1901, 1905, 1907)



$\vdash$	<u> </u>	7







				_	
D1	E27022E	50 kohms ±10% 0.1W LIN	R29	5010092	220 ohms ±5% 1/8W
R1 R2	5370225 5370225	50 kohms $\pm 10\%$ 0.1W LIN	R30	5010052	10 kohms ±5% 1/8W
R3	5370225	50 kohms ±10% 0.1W LIN	R31	5010070	390 ohms $\pm 5\%$ 1/8W
R4	5370225	50 kohms ±10% 0.1W LIN	R32	5010045	47 kohms ±5% 1/8W
R5	5010079	22 kohms ±5% 1/8W	R33	5010083	$270 \text{ kohms } \pm 5\%  1/8\text{W}$
R6	5010073	15 kohms ±5% 1/8W	R34	5010059	10 kohms ±5% 1/8W
R7	5010053	68 kohms ±5% 1/8W	R35	5370061	50 kohms $\pm 20\%$ 0.1W LIN
R8	5010062	68 kohms ±5% 1/8W	R36	5010839	68 kohms $\pm 5\%$ 1/16W
R9	5010062	68 kohms $\pm 5\%$ 1/8W	R37	5010060	39 kohms $\pm 5\%$ 1/8W
R12	5010075	33 kohms $\pm 5\%$ 1/8W	R38	5010076	3.3 kohms $\pm 5\%$ 1/8W
R13	5010153	1.2 kohms ±5% 1/8W	R39	5370058	5 kohms ±20% 0.1W LIN
R15	5010053	15 kohms ±5% 1/8W	R40	5370058	5 kohms ±20% 0.1W LIN
R16	5010058	470 ohms ±5% 1/8W	R41	5370068	25 kohms ±20% 0.1W LIN
R17	5010144	680 ohms ±5% 1/8W	R42	5020347	$100 \text{ ohms } \pm 5\% \ 2.5 \text{W}$
R18	5010067	560 ohms ±5% 1/8W	R43	5010040	1 kohms ±5% 1/8W
R20	5010092	220 ohms ±5% 1/8W	R44	5010154	$8.2 \text{ kohms } \pm 5\%  1/8\text{W}$
R21	5020345	47 ohms $\pm 10\% \ 1/4W$	R45	5370058	$5 \text{ kohms } \pm 20\%  0.1 \text{W LIN}$
R22	5010067	560 ohms ±5% 1/8W	R46	5010144	680 ohms $\pm 5\%$ 1/8W
R23	5010298	$2.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R47	5370074	$10 \text{ kohms } \pm 20\%  0.1 \text{W LIN}$
R24	5010044	330 ohms ±5% 1/8W	R50	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R25	5010070	390 ohms ±5% 1/8W	R51	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R26	5010448	22 ohms ±5% 1/8W	R52	5010135	$18 \text{ kohms } \pm 5\%  1/8\text{W}$
R27	5010044	330 ohms $\pm 5\%$ 1/8W	R53	5010135	$18 \text{ kohms } \pm 5\%  1/8\text{W}$
R28	5020347	$100 \text{ ohms } \pm 5\% \ 2.5W$	R54	5010153	1.2 kohms $\pm 5\%$ 1/8W
C1	4010060	22 nF -20 +80% 40V	C28	4010041	10 nF -20 +80% 40V
C2	4201058	0.47 μF 35V	C29	4010041	10 nF -20 +80% 40V
C3	4000104	$4.7  \text{pF} \pm 0.25  \text{pF}  63 \text{V}$	C30	4010041	$10\mathrm{nF}$ -20 $+80\%$ $40\mathrm{V}$
C4	4000099	$3.3  \mathrm{pF} \pm 0.25  \mathrm{pF}  63 \mathrm{V}$	C31	4200101	10 μF 16V
C5	4010027	1 nF ±10% 100V	C32	4010041	10  nF - 20 + 80%  40V
C6	4010027	1 nF ±10% 100V	C33	4010041	10 nF -20 +80% 40V
C7	4010027	1 nF ±10% 100V	C34	4010041	10 nF -20 +80% 40V
C8	4010027	1 nF ±10% 100V	C35	4201057	1 μ <b>F</b> 35V
C9	4000106	$8.2 \mathrm{pF} \pm 0.25 \mathrm{pF} 250 \mathrm{V}$	C36	4201069	$2.2 \mu\text{F} \pm 20\% 35\text{V}$
C11	4010087	$470 \text{ pF} \pm 10\% 63\text{V}$	C37 '	4200101	$10  \mu\text{F} \pm 20\%  16\text{V}$
C12	4011022	4.7 nF -20 +80% 40V	C38	4010041	10 nF -20 +80% 40V
C13	4000105	$5.6  \mathrm{pF} \pm 0.25  \mathrm{pF}  63 \mathrm{V}$	C39	4000085	$100 \text{ pF} \pm 2\% 63\text{V}$
C14	4101007	220 pF ±5% 63V	C40	4010041	10 nF -20 +80% 40V
C16	4010087	470 pF ±10% 63V	C41	4010060	22 nF -20 +80% 40V 4.7 μF ±20% 25V
C17	4010087	470 pF ±10% 63V	C42	4200108	$6.8 \text{ nF} \pm 10\% 250\text{V}$
C18	4011022	4.7 nF -20 +80% 40V	C43 C44	4130050 4201035	$2.2 \mu\text{F} \cdot 10 + 50\% 63\text{V}$
C19	4000107	68 pF ±2% 63V	C44 C45	4201033	100 μF 16V
C20 C21	4000109 4011022	56 pF ±2% 63V 4.7 nF -20 +80% 40V	C43	4130114	470 nF ±10% 100V
C21	4011022	$3.9 \text{ pF} \pm 0.25 \text{ pF} 63V$	C40	4130114	
C23	4010041	10 nF -20 +80% 40V	C48	4101007	220 pF ±5% 63V
C23	4010041	10 nF -20 +80% 40V	C50	4130104	220 pF ±3% 35V 220 nF ±20% 100V
C25	4000085	100 pF ±2% 63V	C51	4010060	22 nF -20 +80% 40V
C26	4000110	82 pF ±5% 63V	C52	4101026	4.7 nF ±5% 63V
C27	4201065	10 μF 63V	C53	4101026	4.7 nF ±5% 63V
		· · · · · · · · · · · · · · · · · · ·			
BP1	8030020	10.7 MHz			
BP2	8030020	10.7 MHz			
BP3	8030020	10.7 MHz			
BP4	8030020	10.7 MHz			
 L2	8000000	Osc	L9	8020369	IF 10.7 MHz
L3	8020322 8020321	Osc. RF	L9 L10	8020361	Coil
L4	8020321	RF Coil	710	0020301	COL
L5	8020320	Aerial Coil		3304014	Cover for L2
L6	6850127	1.2 µH		3304014	Cover for L7
L7	8020323	IF 10.7 MHz		3304014	Cover for L8/L9
L8	8020368	IF 10.7 MHz		3302317	Cover for Osc.
		· · ·			
P1	7220213	Plug 2 pins	P6	7220186	Plug 11 pins
P2	7220213	Plug 2 pins	P7	7220204	Plug 6 pins
P3	7220122	Plug 4/3 pins			
		-			

PC1, 8002449 FM (Type 1903)



C54 4100076 2n7 ±5% 63V C55 4100076 2n7 ±5% 63V

Øvrige komponenter som i styklisten for PC1, 8002416

Other components as in parts list for PC1, 8002416

Übrige Komponenten wie in Stückliste für PC1, 8002416

PC2, 8002398 FM Interface









R1	5010298	2.7 kohms ±5% 1/8W	R27	5010061	56 kohms ±5% 1/8W
R2	5370050	1 kohms $\pm 20\%$ 0.1W LIN	R28	5010074	680 kohms ±5% 1/8W
R3	5010247	1.5 kohms $\pm 5\%$ 1/8W	R29	5010054	1 Mohms ±5% 1/8W
R4	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R30	5010045	47 kohms $\pm 5\% \ 1/8W$
R5	5010065	100 ohms $\pm 5\%$ 1/8W	R31	5010063	150 kohms ±5% 1/8W
R6	5010093	1.5 Mohms ±10% 1/8W	R32	5010063	150 kohms ±5% 1/8W
R7	5010049	100 kohms ±5% 1/8W	R33		
R8	5010083	270 kohms ±5% 1/8W	R35	5010638	10 Mohms ±10% 1/8W
R10	5010770	4.7 Mohms ±10% 1/8W	R36	5010053	15 kohms ±5% 1/8W
R11	5010060	39 kohms ±5% 1/8W	R37	5010045	47 kohms $\pm 5\%$ 1/8W
R12	5010063	150 kohms ±5% 1/8W	R38	5370050	1 kohms ±20% 0.1W LI
R13	5010063	150 kohms ±5% 1/8W	R39	5010052	6.8 kohms $\pm 5\%$ 1/8W
R14	5010083	270 kohms ±5% 1/8W	R40	5010061	56 kohms ±5% 1/8W
R17	5010070	390 ohms $\pm 5\%$ 1/8W	R41	5010298	2.7 kohms $\pm 5\%$ 1/8W
R18	5010070	220 kohms ±5% 1/8W	R42	5010054	1 Mohms ±5% 1/8W
R19	5010120	470 kohms ±5% 1/8W	R44	5010048	4.7 kohms ±5% 1/8W
R20	5010077	220 kohms ±5% 1/8W	R45	5010048	4.7 kohms $\pm 5\%$ 1/8W
R21	5010120	2.7 kohms $\pm 5\%$ 1/8W	R46	5010135	18 kohms $\pm 5\% \ 1/8W$
R22	5010230	1 kohms ±5% 1/8W	R47	5010061	56 kohms ±5% 1/8W
R23	5010040	1 Mohms ±5% 1/8W	R49	5010135	18 kohms ±5% 1/8W
R24	5370128	100 kohms ±20% 0.1W LIN	R50	5010061	56 kohms ±5% 1/8W
R25	5010247	1.5 kohms ±5% 1/8W	R51	5010135	18 kohms ±5% 1/8W
R26	5010247	$56 \text{ kohms } \pm 5\%  1/8\text{W}$	R52	5010135	18 kohms $\pm 5\%$ 1/8W
C1	4200092	47 μF 16V	C14	4100077	196 pF ±2.5% 63V
C2	4130155	$1  \mu F \pm 10\%  100V$	C15	4100077	196 pF ±2.5% 63V
C3	4010041	10 nF -20 +80%	C16	4100078	$4.02 \text{ nF } \pm 2.5\% 63\text{V}$
C4	4010060	22 nF -20 +80% 40V	C17	4100080	866 pF ±2.5% 63V
C5	4010041	10 nF -20 +80% 40V	C18	4100078	$4.02 \text{ nF } \pm 2.5\% 63\text{V}$
C6	4000016	$10 \text{ pF} \pm 2\% 63 \text{V}$	C19	4100080	$866 \text{ pF} \pm 2.5\% 63V$
C8	4010060	22 nF -20 +80% 40V	C20	4100079	590 pF ±2.5% 63V
C10	4130104	220 nF ±20% 100V	C21	4200325	1 μF ±10% 35V
C11	4201035	2.2 µF -10 +50% 63V	C22	4100079	$590 \text{ pF} \pm 2.5\% 63V$
C12	4201072	0.22 μF 35V	C23	4200325	$1 \mu F \pm 10\% 35V$
C13	4201072	0.22 μF 35V			•
 L1	8022079	78 Mh			
L2	8022079	78 Mh			
L3		78 Mh			
L3 L4	8022079 8022079	78 Mh			
L4 	8022019	78 WIII			
P6	7210110	Socket 11 pins			
P7	7210273	Socket 6 pins			
P8	7220210	Plug 4 pins			
P9	7220211	Plug 5 pins			
P10	7220122	Plug 4/3 pins			

### 4-3

## Bang&Olufsen

### PC3, 8002399 Preamplifier



R1	5010040	1 kohms ±5% 1/8W	R230	5010048	4.7 kohms $\pm 5\%$ 1/8W
R10	5010059	10 kohms ±5% 1/8W	R231	5010049	$100  \text{kohms}  \pm 5\%  1/8 \text{W}$
R11	5010076	3.3 kohms ±5% 1/8W	R234	5010070	390 ohms $\pm 5\%$ 1/8W
R12	5010059	10 kohms ±5% 1/8W	R235	5370231	470 ohms $\pm 20\%$ 0.2W LIN
R13	5010076	3.3 kohms $\pm 5\%$ 1/8W	R236	5010298	$2.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R201	5010064	2.2 kohms ±5% 1/8W	R237	5020293	$34 \text{ kohms } \pm 1\%  1/8\text{W}$
R202	5010077	$470 \text{ kohms } \pm 5\%  1/8\text{W}$	R238	5010083	$270  \text{kohms}  \pm 5\%  1/8 \text{W}$
R203	5010059	10 kohms $\pm 5\%$ 1/8W	R239	5010061	56 kohms ±5% 1/8W
R204	5010059	10 kohms ±5% 1/8W	R240	5020292	$17.8 \text{ kohms } \pm 1\%  1/8\text{W}$
R205	5370224	22 kohms ±20% 0.2W LIN	R241	5020294	$82.5  \text{kohms} \pm 1\%  1/8 \text{W}$
R206	5010154	8.2 kohms ±5% 1/8W	R242	5020291	$3.32 \text{ kohms } \pm 1\%  1/8\text{W}$
R214	5010059	10 kohms ±5% 1/8W	R243	5020344	$4.12 \text{ kohms } \pm 1\%  1/8\text{W}$
R215	5010047	120 kohms ±5% 1/8W	R244	5020295	178 kohmş ±1% 1/8W
R216	5010047	470 kohms ±5% 1/8W	R245	5020293	34 kohms $\pm 1\%$ 1/8W
R217	5010040	1 kohms ±5% 1/8W	R249	5010041	$5.6 \text{ kohms } \pm 5\%  1/8\text{W}$
R220	5010064	2.2 konms ±5% 1/8W	R250	5010049	$100  \mathrm{kohms}  \pm 5\%  1/8 \mathrm{W}$
R221	5010077	470 kohms ±5% 1/8W	R251	5010041	$5.6  \text{kohms} \pm 5\%  1/8 \text{W}$
R222	5370224	$22 \text{ kohms } \pm 20\% \ 0.2 \text{W LIN}$	R252	5010053	$15 \text{ kohms } \pm 5\%  1/8\text{W}$
R223	5010046	$12 \text{ kohms } \pm 5\%  1/8\text{W}$	R253	5010064	$2.2 \text{ kohms } \pm 5\%  1/8\text{W}$
R224	5010046	$12 \text{ kohms } \pm 5\%  1/8\text{W}$	R254	5010411	47 ohms $\pm 5\% \ 1/8W$
R225	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R255	5010075	$33 \text{ kohms } \pm 5\%  1/8\text{W}$
R226	5010053	15 kohms ±5% 1/8W	R256	5010065	100 ohms $\pm 5\%$ 1/8W
R227	5010059	10 kohms ±5% 1/8W	R257	5010411	47 ohms $\pm 5\%$ 1/8W
R228	5010059	10 kohms ±5% 1/8W	R258	5010079	$22 \text{ kohms } \pm 5\%  1/8\text{W}$
R229	5010059	10 kohms ±5% 1/8W			

C1	4130150	100 nF ±20% 100V	C214	4000109	56 pF ±2% 63V
C2	4130150	100 nF ±20% 100V	C215	4201065	10 μF 63V
C3	4130150	100 nF ±20% 100V	C216	4000109	56 pF ±2% 63V
C4	4130150	100 nF ±20% 100V	C217	4000114	47 pF ±2% 63V
C5	4010060	22 nF -20 +80% 40V	C218	4200098	100 μF 10V
C6	4010060	22 nF -20 +80% 40V	C219	4130101	100 nF ±5% 250V
C10	4010060	22 nF -20 +80% 40V	C220	4200101	10 μF ±20% 16V
C11	4010060	22 nF -20 +80% 40V	C221	4130142	$220  \text{nF} \pm 5\%  100 \text{V}$
C201	4003136	100 pF ±2% 63V	C222	4130142	220 nF ±5% 100V
C202	4000109	56 pF ±2% 63V	C223	4100057	$1.5  \text{nF} \pm 2.5\%  63 \text{V}$
C203	4200342	$10  \mu \text{F} - 10 + 50\%  63\text{V}$	C224	4130181	680 nF ±5% 100V
C206	4000109	56 pF ±2% 63V	C225	4100146	2.2 nF ±2.5% 63V
C207	4200342	$10  \mu \text{F} - 10 + 50\%  63 \text{V}$	C229	4000029	$220  \text{pF} \pm 5\%  63 \text{V}$
C211	4003136	$100 \text{ pF} \pm 2\% 63 \text{V}$	C230	4201065	10 μ <b>F</b> 63 <b>V</b>
C212	4201065	10 μF 63V	C231	4000071	270 pF ±5% 63V
C213	4000109	56 pF ±2% 63V	C236	4000016	10 pF ±2% 63V
		=			

### <del>)</del>

### PC4, 8002403 Filter and Tone Controls



#### 7500154 Contact pins

-					
R1	5010044	330 ohms $\pm 5\%$ 1/8W	R38	5010079	22 kohms ±5% 1/8W
R2	5010065	$100 \text{ ohms } \pm 5\%  1/8\text{W}$	R201	5010120	220 kohms ±5% 1/8W
R3	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R202	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$
R4	5010049	$100 \text{ kohms } \pm 5\%  1/8\text{W}$	R203	5010048	$4.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R5	5010059	$10  ext{ kohms } \pm 5\%  ext{ } 1/8 ext{W}$	R204	5010076	$3.3  \text{kohms} \pm 5\%  1/8 \text{W}$
R6	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R210	5010059	$10  \mathrm{kohms}  \pm 5\%  1/8 \mathrm{W}$
R8	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R211	5010059	10 kohms ±5% 1/8W
R9	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R212	5010076	$3.3  \text{kohms} \pm 5\%  1/8 \text{W}$
R10	5010076	3.3 kohms $\pm 5\%$ 1/8W	R213	5010066	$1.8  \text{kohms} \pm 5\%  1/8 \text{W}$
R11	5010076	3.3 kohms ±5% 1/8W	R214	5010066	$1.8  \text{kohms} \pm 5\%  1/8 \text{W}$
R12	5010062	68 kohms $\pm 5\% \ 1/8W$	R215	5310094	2 x 20 kohms Lin
R14	5010059	10 kohms ±5% 1/8W	R216	5010076	$3.3  \text{kohms} \pm 5\%  1/8 \text{W}$
R15	5010049	$100 \text{ kohms } \pm 5\%  1/8\text{W}$	R217	5310094	2 x 20 kohms Lin
R20	5010079	22 kohms ±5% 1/8W	R218	5010040	$1 \text{ kohms } \pm 5\%  1/8\text{W}$
R21	5010046	12 kohms ±5% 1/8W	R219	5010076	$3.3  \text{kohms} \pm 5\%  1/8 \text{W}$
R22	5010135	18 kohms ±5% 1/8W	R220	5010066	1.8 kohms ±5% 1/8W
R23	5010040	1 kohms ±5% 1/8W	R221	5010066	$1.8  \text{kohms} \pm 5\%  1/8 \text{W}$
R24	5010059	10 kohms ±5% 1/8W	R224	5010120	$220  \text{kohms} \pm 5\%  1/8 \text{W}$
R25	5010072	180 kohms ±5% 1/8W	R226	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$
R26	5010072	$180 \text{ kohms } \pm 5\%  1/8\text{W}$	R227	5010049	$100  \text{kohms} \pm 5\%  1/8 \text{W}$
R30	5010059	10 kohms ±5% 1/8W	R228	5010298	$2.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R31	5010059	10 kohms ±5% 1/8W	R229	5010040	$1 \text{ kohms } \pm 5\%  1/8\text{W}$
R32	5010076	3.3 kohms ±5% 1/8W	R230	5010120	$220  \text{kohms} \pm 5\%  1/8 \text{W}$
R33	5010059	10 kohms ±5% 1/8W	R235	5010120	$220  \text{kohms} \pm 5\%  1/8 \text{W}$
R34	5010076	3.3 kohms ±5% 1/8W	R236	5010074	$680  \text{kohms} \pm 5\%  1/8 \text{W}$
R36	5010120	220 kohms ±5% 1/8W	R237	5010083	$270  \text{kohms} \pm 5\%  1/8 \text{W}$

5020099 86.6 kohms  $\pm 1\%$  1/8W

5001032 1.5 kohms  $\pm 10\%$  1/2W

 $5010047 \quad 120 \text{ kohms } \pm 5\% \text{ } 1/8\text{W}$ 

5020087 4.7 ohms  $\pm 10\%$  0.7W

5230008 50 ohms PTC

680 ohms ±10% 1/2W

47 kohms  $\pm 5\%$  1/8W

120 kohms ±5% 1/8W

R249

R250

R251

R252

R253

R254

R255

5001026

5010045

5010047

R243

## Bang&Olufsen

R238

R220

R223

R224

R225

R226

R227

R228

5020349

5010151 56 ohms ±5% 1/8W

 $5010061 - 56 \text{ kohms } \pm 5\% \text{ } 1/8\text{W}$ 

5010065 100 ohms ±5% 1/8W

5010411 47 ohms ±5% 1/8W

5010253 33 ohms  $\pm 5\%$  1/8W

5370208 100 ohms  $\pm 20\%$  0.1W

100 ohms ±5% 1.6W

5010120 220 kohms ±5% 1/8W

	K238	5010120		R244	5020033	150 kohms ±1% 1/8W
	R239		68 kohms ±5% 1/8W	R244 R245		86.6 kohms ±1% 1/8W
	R240		100 ohms ±1% 1/8W		5370061	$47 \text{ kohms } \pm 20\% \ 0.1 \text{W}$
	R241		680 ohms ±2% 1/8W	R246		10 Mohms ±10% 1/8W
	R242	5010758	1.8 kohms ±2% 1/8W	R247	5010638	10 Wollins ± 10% 1/6W
	C1	4010065	2.7 nF ±10% 63V	C203	4130141	8.2 nF ±10% 250V
├ <b>──</b> }	C2	4000109	56 pF ±2% 63V	C204	4010067	$1.5  \text{nF} \pm 10\%  63 \text{V}$
	C3	4010060	22 nF -20 +80% 40V	C205	4130150	100 nF ±20% 100V
	C6		10 nF -20 +80% 40V	C206	4130150	100 nF ±20% 100V
	C7		10 nF -20 +80% 40V	C207	4130109	$10  \mathrm{nF}  \pm 10\%  250 \mathrm{V}$
	C13		$10  \mu F - 20 + 50\%  63V$	C208	4130109	$10  \text{nF} \pm 10\%  250 \text{V}$
	C14		$10  \mu \text{F} - 20 + 50\%  63 \text{V}$	C211	4201035	2.2 μF -20 +50% 63V
	C15		82 pF ±5% 63V	C212	4010027	$1 \text{ nF} \pm 10\% 100\text{V}$
	C18		10 nF -20 +80% 40 V	C213	4010024	$470  \mathrm{pF} \pm 10\%  100 \mathrm{V}$
	C19		10 nF -20 +80% 40V	C214	4130106	$330  \text{nF} \pm 20\%  100 \text{V}$
	C21		22 nF -20 +80% 40V	C215	4130101	$100  \text{nF} \pm 5\%  250 \text{V}$
	C22		22 nF -20 +80% 40V	C220	4010088	220 pF ±10% 63V
	C24		10 nF -20 +80% 40V	C221	4010088	$220 \mathrm{pF} \pm 10\% 63\mathrm{V}$
	C25		10 nF -20 +80% 40V	C222	4010088	$220 \text{ pF} \pm 10\% 63\text{V}$
	C27		10 nF -20 +80% 40V	C223	4010088	$220 \mathrm{pF} \pm 10\% 63\mathrm{V}$
	C28		10 nF -20 +80% 40V	C224	4010088	
	C30	-	10 nF -20 +80% 40V	C225	4010088	$220 \text{ pF} \pm 10\% 63\text{V}$
	C31		10 nF -20 +80% 40V	C228		$4.7 \hat{\mu} \pm 20\%  25V$
	C33		10 nF -20 +80% 40V	C230	4130079	
	C34		10 nF -20 +80% 40V	C231	4130100	68 nF ±10% 250V
	C34		$2.2 \mu\text{F} - 10 + 50\% 63\text{V}$	C232	4130079	22 nF ±20% 250V
	C201		2.2 µF -10 +50% 63V	C233	4010027	1 nF ±10% 100V
	C201		$3.3  \text{nF} \pm 10\%  100\text{V}$	C234		10 pF ±2% 63V
•		4010079	3.3 m ±10% 100 v			
<b>-⊘</b> -	ME1	8450044				
0 0		7400211 7400211	Switch M. PATH			Switch FILTER 2 Switch STEREO Switch LOUDN.
		7400211	Switch FILTER 1		7400211	Switch ECODIN.
	P24	7220145	Plug 6/5 pins	P28		Plug 8 pins
<del></del>	P25	7220134	Plug 2 pins	P29		Plug 6 pins
· · · · · · · · · · · · · · · · · · ·	P26	7220212	Plug 3 pins	P30	7220212	Plug 3 pins
	P27	7220122	Plug 4/3 pins	P31	7220220	Plug 6 pins
PC5, 8002404	R200	5370236	100 ohms ±20% 0.1W	R229	5010061	56 kohms ±5% 1/8W
	R201		680 ohms ±5% 1/8W	R230	5010061	· · · · · · · · · · · · · · · · · ·
Output Amplifier	R201	5010076	***	R231	5010000	270 ohms ±5% 1/8W
	R203	5010059	10 kohms ±5% 1/8W	R232	5010000	270 ohms ±5% 1/8W
H	R204	5010067	560 ohms ±5% 1/8W	R233	5010061	56 kohms ±5% 1/8W
	R205	5010046	12 kohms ±5% 1/8W	R234	5010144	680 ohms $\pm 5\%$ 1/8W
	R206	5010067		R235	5010144	680 ohms $\pm 5\%$ 1/8W
	R207	5010040	1 kohms ±5% 1/8W	R236	5100224	$0.18 \text{ ohms } \pm 10\% 2W$
	R208	5010247		R237	5100224	$0.18 \text{ ohms } \pm 10\% 2W$
	R209	5010069	*	R238	5001033	$1.8 \text{ kohms } \pm 10\%  1/2\text{W}$
	R210	5010751		R239	5001033	$1.8 \text{ kohms } \pm 10\%  1/2\text{W}$
	R211	5020114		R240	5001029	1 kohms ±10% 1/2W
	R212	5001042		R241	5001021	330 ohms ±10% 1/2W
	R213	5010151		R242	5001021	330 ohms $\pm 10\% \ 1/2W$
	R214	5010120		R243	5001032	1.5 kohms $\pm 10\% \ 1/2W$
	R215	5010061		R244	5001029	1 kohms ±10% 1/2W
	R216	5010061		R245	5001021	330 ohms $\pm 10\% \ 1/2W$
	R217	5010079		R246	5001021	330 ohms ±10% 1/2W
	R218	5010411		R247	5001030	1.2 kohms $\pm 10\% \ 1/2W$
	R219	5010058		R248	5001030	
	D220		56 dhms +5% 1/8W	R249		$1.5 \text{ kohms } \pm 10\%  1/2\text{W}$

### 4-5

### Bang&Olufsen

 $4200342 \quad 10 \, \mu F - 10 + 50\% \, 63V$ 

4010041 22 nF -20 +80% 40V 4010041 22 nF -20+80% 40V

4200380  $1 \mu F - 10 + 50\% 63V$ 

C45.

C46

C47

C51

		DOCC	E001000	200 -hma +100/ 1/2W			
		R256	5001022	390 ohms ±10% 1/2W			
		R257	5001024	470 ohms ±10% 1/2W			
		R258	5001026	680 ohms $\pm 10\% \ 1/2W$			
		R260	5010065	100 ohms $\pm 5\%$ 1/8W			
		C200	4201061	4.7 μ <b>F</b> 63V	C212	4130089	$22 \text{ nF } \pm 10\% \ 250\text{V}$
<b></b>		C201	4010027	1 nF ±10% 100V	C213	4130103	$100  \text{nF} \pm 20\%  250 \text{V}$
		C202	4200368	100 μF 63V	C214	4200299	220 μF 40V
		C203	4010060	22 nF -20 +80% 40V	C215	4200299	220 μF 40V
		C204	4010060	22 nF -20 +80% 40V	C216	4130103	100 nF ±20% 250V
		C205	4200330	100 μF -10 +50% 10V	C217	4130103	100 nF ±20% 250V
					C220	4010027	1 nF ±10% 100V
		C206	4000112	56 pF ±5% 250V	C220	4010027	1 nF ±10% 100V
		C207	4010041	10 nF -20 +80% 40V			
		C208	4003124	56 pF ±2% 63V	C222	4010027	1 nF ±10% 100V
		C209	4130109	$10 \mathrm{nF} \pm 10\% 250\mathrm{V}$	C223	4010027	$1 \text{ nF} \pm 10\% 100\text{V}$
		C210	4010041	10 nF -20 +80% 40V			
		C211	4200330	100 μF -10 +50% 10V			
		L201	6850114	$0.5  \mu H$			
		P38	7220212	Plug 3 pins			
<del></del>		P39	7220129	Plug 2 pins			
			7500124	Contact pins			
PC6, 8002402 Power		R1	5010305	820 kohms ±5% 1/8W	R52	5010052	$6.8  \text{kohms} \pm 5\%  1/8 \text{W}$
•		R2	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R53	5010075	$33 \text{ kohms } \pm 5\%  1/8\text{W}$
Supply and Remote		R3	5010298	2.7 kohms $\pm 5\%$ 1/8W	R54	5010052	6.8 kohms ±5% 1/8W
Receiver		R4	5010298	2.7 kohms $\pm 5\%$ 1/8W	R55	5002017	220 ohms ±10% 1W
		R7		1.5 kohms $\pm 5\%$ 1/8W	R56	5002017	220 ohms ±10% 1W
				1.5 kohms ±5% 1/8W	R57	5010120	220 kohms ±5% 1/8W
<b></b>		R8		and the second s		5010060	39 kohms $\pm 5\%$ 1/8W
		R9	5010065	100 ohms ±5% 1/8W	R58		
		R16	5010059	10 kohms ±5% 1/8W	R62	5010062	68 kohms ±5% 1/8W
		R17	5010059	10 kohms ±5% 1/8W	R63	5010062	68 kohms ±5% 1/8W
		R23	5010061	$56 \text{ kohms } \pm 5\%  1/8\text{W}$	R64	5010062	68 kohms ±5% 1/8W
		R24	5010052	$6.8 \text{ kohms } \pm 5\%  1/8\text{W}$	R65	5010062	68 kohms ±5% 1/8W
		R25	5001039	$5.6 \text{ kohms } \pm 10\%  1/2\text{W}$	R66	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
		R26	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R67	5010141	$27 \text{ kohms } \pm 5\%  1/8\text{W}$
		R27	5010061	$56 \text{ kohms } \pm 5\%  1/8\text{W}$	R68	5010045	47 kohms ±5% 1/8W
		R28	5002017	220 ohms $\pm 10\% 1W$	R70	5010153	$1.2 \mathrm{kohms} \pm 5\% 1/8\mathrm{W}$
		R29	5010040	1 kohms ±5% 1/8W	R71	5010059	$10  \mathrm{kohms} \pm 5\%  1/8 \mathrm{W}$
		R30	5010040	1 kohms ±5% 1/8W	R72	5010154	$8.2  \text{kohms} \pm 5\%  1/8 \text{W}$
		R31	5010059	10 kohms $\pm 5\%$ 1/8W	R73	5010052	$6.8  \text{kohms} \pm 5\%  1/8 \text{W}$
÷		R32		10 kohms ±5% 1/8W	R74	5010052	6.8 kohms ±5% 1/8W
	•	R36		1 kohms ±5% 1/8W	R76	5010298	$2.7  \text{kohms} \pm 5\%  1/8 \text{W}$
		R37	5010059	10 kohms ±5% 1/8W	R77	5010059	10 kohms ±5% 1/8W
		R38		6.8 kohms ±5% 1/8W	R78	5010153	1.2 kohms ±5% 1/8W
					R79	5010775	5.6 kohms ±5% 1/8W
		R39		27 kohms ±5% 1/8W		5010775	
		R50		47 kohms ±5% 1/8W	R80	3010773	5.0 KOIIIIS ±2 /2 1/0 1/
		R51	5010060	39 kohms ±5% 1/8W			
			4000	00 7 10 700 777	000	4100105	100 -E + 100 050M
		C1	4200016	·	C30	4130107	100 nF ±10% 250V
		C2		$150  \mathrm{pF} \pm 5\%  63 \mathrm{V}$	C31	4200405	4700 μF 16V
		C3		$22 \text{ nF } \pm 10\% \ 250\text{V}$	C32	4130106	330 nF ±20% 100V
		C4	4010041	$10  \mathrm{nF}$ -20 $+80\%  40\mathrm{V}$	C33	4200406	2200 μF 40V
		C5	4201069		C34	4200406	2200 μF 40V
		C6	4201069	$2.2  \mu F \pm 20\%  35V$	C35	4201065	10 μ <b>F</b> 63 V
		C7	4100058	$3.3  \text{nF} \pm 2.5\%  63 \text{V}$	C36	4010027	$1  \mathrm{nF} \pm 10\%  100 \mathrm{V}$
		C8	4100057	$1.5  \text{nF} \pm 2.5\%  63 \text{V}$	C37	4130106	$330  \text{nF} \pm 20\%  100 \text{V}$
		C9		1.5 nF ±2.5% 63V	C38	4130106	$330  \text{nF} \pm 20\%  100 \text{V}$
		C20	4130136		C39	4200403	100 μF 25V
		C21	4201066		C40	4200403	100 μF 25V
		C22		22 nF -20 +80% 40V	C43	4200342	10 μF -10 +50% 63V
		C23		22 nF -20 +80% 40V	C44	4200342	$10  \mu \text{F} - 10 + 50\%  63\text{V}$
		C25		10 uF -10 +50% 63V	C45		10 μF -10 +50% 63V

4200342 10 μF -10 +50% 63V 4200342 10 μF -10 +50% 63V

4010063 4.7 nF ±10% 63V 4130107 100 nF ±10% 250V

4130107  $100 \text{ nF} \pm 10\% 250 \text{V}$ 

C25

C26

C27

C28

201.30101011					
	L1	8022106	78 mH		
	L4	8020342	10 mH		
	L5	8020342	10 mH		
	 F1	6600009	2A-T/250V		
		7500002	Holder for F1		
	P46	7220115	Plug 7/6 pins	P51	7
<del> </del>	P48	7220217		P52	7
	P49	7220210	Plug 4 pins	P53	7
	P50	7220210	Plug 4 pins	P54	7
		3302326	Screen copper foil side		
		3304006	Screen		
PC7, 8002407 Starting	R1	5110043	5.6 ohms ±10% 5.5W		
Up Circuit	R2	5110043	$5.6 \text{ ohms } \pm 10\% 5.5 \text{W}$		
(Type 1901, 1905)	C1	4130191	330 nF ±20% 275V		
	<del></del>				
	F2	6600010	4A-T 250V S IEC 127	-	
<del></del>	F3	6600000	250 mA-T 250V S IEC 127		
		7500002	Holder for fuse		
	RL1	7600053			
	RL2	7600060			

PC7, 8002425 Starting Up Circuit (Type 1903, 1907)







PC8, 8002406 Display



F1	6600009 7500002	2A-T/250V Holder for F1			
P46	7220115	Plug 7/6 pins	P51	7220210	Plug 4 pins
P48	7220217	Plug 10 pins	P52	7220158	Plug 5 pins
P49	7220210	Plug 4 pins	P53	7220114	Plug 5/4 pins
P50	7220210	Plug 4 pins	P54	7220236	Plug 6 pins
	3302326 3304006	Screen copper foil side Screen			
R1 R2	5110043 5110043	5.6 ohms ±10% 5.5W 5.6 ohms ±10% 5.5W			
C1	4130191	330 nF ±20% 275V			
F2	6600010	4A-T 250V S IEC 127			
F3	6600000 7500002	250 mA-T 250V S IEC 127 Holder for fuse			
		Tiolder for fact			
RL1 RL2	7600053 7600060				
R1	5110043	5.6 ohms ±10% 5.5W			
R2	5110043	5.6 ohms ±10% 5.5W			
R3	5000194	3.3 Mohms ±10% 1/2W			
C1	4130191	330 nF ±20% 275V			
F2	6600046	10A 250V			
F3	6600033	0.5A-T 250V			
RL1	7600053				
RL2	7600060				
R1	5020101	0.15 ohms ±10% 1/2W	R23	5010052	6.8 kohms ±5% 1/8W
R2	5010144	680 ohms ±5% 1/8W	R24	5010092	220 ohms ±5% 1/8W 3.3 kohms ±5% 1/8W
R3 R4	5010049 5010053	100 kohms ±5% 1/8W 15 kohms ±5% 1/8W	R25 R26	5010076 5010052	6.8 kohms $\pm 5\% 1/8$ W
R5	5010039	68 ohms ±5% 1/8W	R27	5010092	220 ohms ±5% 1/8W
R6	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$	R28	5010076	$3.3  \mathrm{kohms} \pm 5\%  1/8 \mathrm{W}$
R7	5010120	220 kohms ±5% 1/8W	R29	5010052	6.8 kohms $\pm 5\%$ 1/8W
R8	5010052	6.8 kohms ±5% 1/8W	R30	5010092	220 ohms ±5% 1/8W
R9	5010057	150 ohms ±5% 1/8W	R33	5010045	47 kohms ±5% 1/8W 220 ohms ±5% 1/8W
R10 R11	5010065 5370050	100 ohms ±5% 1/8W 1 kohms ±20% 0.1W	R34 R35	5010092 5010045	47 kohms ±5% 1/8W
R12	5010052	12 kohms ±5% 1/8W	R36	5010043	220 ohms ±5% 1/8W
R13	5010075	33 kohms ±5% 1/8W	R37	5010045	47 kohms $\pm 5\%$ 1/8W
R14	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R38	5010092	220 ohms ±5% 1/8W
R15	5370050	1 kohms ±20% 0.1W	R40	5010092	220 ohms ±5% 1/8W
R16	5010092	220 ohms ±5% 1/8W	R41	5010059	10 kohms ±5% 1/8W
R17 R20	5010069 5010144	3.9 kohms ±5% 1/8W 680 ohms ±5% 1/8W	R42 R43	5010071 5010061	560 kohms ±5% 1/8W 56 kohms ±5% 1/8W
R21	5020101	0.15 ohms ±10% 1/2W	R45 R46	5010040	1 kohms ±5% 1/8W
R22	5010076	3.3 kohms ±5% 1/8W	R47	5010040	1 kohms ±5% 1/8W

5010039 68 ohms ±5% 1/8W

5010039 68 ohms ±5% 1/8W

5010039 68 ohms  $\pm 5\%$  1/8W 5010039 68 ohms ±5% 1/8W

47 ohms ±5% 1/8W

68 ohms  $\pm 5\%$  1/8W

68 ohms ±5% 1/8W

68 ohms ±5% 1/8W

68 ohms ±5% 1/8W

68 ohms ±5% 1/8W 5010039 68 ohms  $\pm 5\%$  1/8W

68 ohms ±5% 1/8W

5010411

5010039

5010039

5010039

5010039

5010039

5010039

R60 R61 R62	5010039 5010039 5010039	68 ohms ±5% 1/8W 68 ohms ±5% 1/8W 68 ohms ±5% 1/8W	R73 R74
C1 C2 C3 C4 C5 C6	4010060 4010041 4200108 4010061 4010061 4200342	$22  \text{nF} - 20 + 80\%  40V$ $10  \text{nF} - 20 + 80\%  40V$ $4.7  \mu\text{F} \pm 20\%  25V$ $2.2  \text{nF} \pm 10\%  63V$ $2.2  \text{nF} \pm 10\%  63V$ $2.2  \text{nF} \pm 10\%  63V$ $10  \mu\text{F} - 10 + 50\%  63V$	C10 C11 C12 C14 C15 C16

R48

R49

R50

R51

R52

R53 R56

R57

R58

R59

5010040 1 kohms  $\pm 5\%$  1/8W

5010039 68 ohms ±5% 1/8W

5010039 68 ohms  $\pm 5\%$  1/8W

 $5010039 - 68 \text{ ohms } \pm 5\% \text{ } 1/8\text{W}$ 

68 ohms ±5% 1/8W

68 ohms ±5% 1/8W

330 ohms  $\pm 5\%$  1/8W

68 ohms ±5% 1/8W

68 ohms  $\pm 5\%$  1/8W

68 ohms ±5% 1/8W

5010039

5010039

5010044

5010039

5010039

5010039

R63

R64 R65

R66

R67

R68

R69

R70

R71

R72

IL1	8230060	6V 80 mA
IL2	8230060	6V 80 mA
IL3	8230060	6V 80 mA
IL4	8230060	6V 80 mA

P71	7220212	Plug 3 pins
P72	7210108	Socket 3 pins
P73	7210274	Socket 7 pins
P74	7210273	Socket 6 pins
P75	7210247	Socket 13 pins

### PC9, 8002493 Microcomputer



P75	7210247	Socket 13 pins			
R1-R7	5010862	7 x 4.7 kohms ±5% 1/8W	R50	5010048	4.7 kohms ±5% 1/8W
R10	5010056	82 ohms ±5% 1/8W	R51	5010048	4.7 kohms $\pm 5\%$ 1/8W
R11	5010056	82 ohms $\pm 5\% \ 1/8W$	R53	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R12	5010056	82 ohms ±5% 1/8W	R54	5010048	$4.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R13	5010056	82 ohms ±5% 1/8W	R55	5010048	$4.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R14	5010056	82 ohms ±5% 1/8W	R56	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R15	5010056	82 ohms ±5% 1/8W	R57	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$
R16	5010056	82 ohms ±5% 1/8W	R58	5010059	$10  \text{kohms} \pm 5\%  1/8 \text{W}$
R17	5010040	1 kohms ±5% 1/8W	R59	5010040	$1 \text{ kohms } \pm 5\%  1/8\text{W}$
R18	5010039	68 ohms ±5% 1/8W	R60	5010682	$2.2 \text{ ohms } \pm 5\%  1/8\text{W}$
R19	5010056	82 ohms ±5% 1/8W	R61	5010141	$27 \text{ kohms } \pm 5\%  1/8\text{W}$
R20	5010056	82 ohms ±5% 1/8W	R62	5010056	82 ohms $\pm 5\% 1/8W$
R21	5010056	82 ohms ±5% 1/8W	R64	5010059	$10  \text{kohms}  \pm 5\%  1/8 \text{W}$
R22	5010056	82 ohms ±5% 1/8W	R65	5010046	$12 \text{ kohms } \pm 5\%  1/8\text{W}$
R23	5010056	82 ohms $\pm 5\% \ 1/8W$	R66	5010848	$3.3 \text{ Mohms } \pm 5\%  1/8\text{W}$
R24	5010056	82 ohms ±5% 1/8W	R67	5010049	$100  \text{kohms} \pm 5\%  1/8 \text{W}$
R25	5010056	82 ohms ±5% 1/8W	R69	5010048	$4.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R26	5010058	470 ohms ±5% 1/8W	R70	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$
R27	5010040	1 kohms ±5% 1/8W	R71	5010403	27 ohms $\pm 5\% \ 1/8W$
R28	5010092	220 ohms ±5% 1/8W	R72	5010079	$22 \text{ kohms } \pm 5\%  1/8\text{W}$
R29	5010079	22 kohms ±5% 1/8W	R73	5010079	$22 \text{ kohms } \pm 5\%  1/8\text{W}$
R30	5010298	$2.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R74	5010049	$100  \text{kohms} \pm 5\%  1/8 \text{W}$
R31	5010298	$2.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R75	5010049	$100  \text{kohms} \pm 5\%  1/8 \text{W}$
R32	5010298	$2.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R76	5010048	$4.7  \text{kohms} \pm 5\%  1/8 \text{W}$
R33	5010059	10 kohms $\pm 5\%$ 1/8W	R77	5010048	$4.7  \mathrm{kohms} \pm 5\%  1/8 \mathrm{W}$
R34	5010059	10 kohms ±5% 1/8W	R78	5010059	$10  \mathrm{kohms}  \pm 5\%  1/8 \mathrm{W}$
R35	5010049	100 kohms ±5% 1/8W	R79	5010059	$10  \mathrm{kohms}  \pm 5\%  1/8 \mathrm{W}$
R36	5010052	6.8 kohms ±5% 1/8W	R80	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R37	5010049	100 kohms ±5% 1/8W	R81	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R38	5010049	100 kohms ±5% 1/8W	R82	5010058	$470 \text{ ohms } \pm 5\%  1/8\text{W}$
R39	5010049	100 kohms ±5% 1/8W	R83	5010092	220 ohms $\pm 5\%$ 1/8W
R40	5010049	100 kohms ±5% 1/8W	R84	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R41	5010362	180 ohms $\pm 5\%$ 1/8W	R85	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R42	5010362	180 ohms ±5% 1/8W	R86	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R43	5010079	22 kohms ±5% 1/8W	R87	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R45	5010048	4.7 kohms $\pm 5\% \ 1/8W$	R88	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R46	5010048	4.7 kohms ±5% 1/8W	R89	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R47	5010048	4.7 kohms ±5% 1/8W	R90	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R48	5010048	$4.7 \text{ kohms } \pm 5\%  1/8\text{W}$	R91	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$
R49	5010048	4.7 kohms ±5% 1/8W	R92	5010059	$10 \text{ kohms } \pm 5\%  1/8\text{W}$

# 4-8 Bang&Olufsen

4-9

200					
R93	5010059		R103	5010058	
R94 R95	5010059		R104	5010058	
R98	5010059		R105	5010058	
	5010049		R106	5010058	470 ohms ±5% 1/8W
R99	5010049		R109	5010040	
R100	5010058		R110	5010040	$1 \text{ kohms } \pm 5\%  1/8\text{W}$
R101	5010058		R111	5010040	
R102	5010058	3 470 ohms ±5% 1/8W	R112	5010040	1 kohms ±5% 1/8W
C1	4010007	1 . T.   100/ 100M	2.0		
C1	4010027		C48	4010027	$1 \text{ nF} \pm 10\% 100\text{V}$
C2	4010027		C49	4010027	
C3	4010027		C51	4010041	
C4	4010027		C52	4010041	
C5	4010027		C53	4010024	•
C6	4010027		C54	4010024	
C7	4010027		C55	4010027	1 nF ±10% 100V
C8	4010041		C57	4130142	
C9	4010041		C58	4010041	10 nF -20 +80% 40V
C10	4010041	10 nF -20 +80% 40V	C59	4010041	10 nF -20 +80% 40V
C11	4010041		C60	4010041	10 nF -20 +80% 40V
C12	4010041	10 nF -20 +80% 40V	C61	4010027	1 nF ±10% 100V
C13	4010041	10 nF -20 +80% 40V	C62	4010027	1 nF ±10% 100V
C14	4010041	10 nF -20 +80% 40V	C63	4010027	1 nF ±10% 100V
C15	4010041	10 nF -20 +80% 40V	C64	4010027	1 nF ±10% 100V
C16	4010027		C65	4010027	1 nF ±10% 100V
C17	4000075	12 pF ±2% 63V	C66	4000069	100 pF ±5% 63V
C18	4000075	=	C67	4000069	100 pF ±5% 63V
C19	4010041	10 nF -20 +80% 40V	C68	4000069	100 pF ±5% 63V
C20	4010041	10 nF -20 +80% 40V	C69	4000069	100 pF ±5% 63V
C21	4010041	10 nF -20 +80% 40V	C70	4010027	1 nF ±10% 100V
C22	4010041	10 nF -20 +80% 40V	C71	4000069	100 pF ±5% 63V
C23	4010041	10 nF -20 +80% 40V	C72	4000069	100 pF ±5% 63V
C24 <sub>5</sub>	4010041	10 nF -20 +80% 40V	C73	4000069	100 pF ±5% 63V
C25	4010041	10 nF -20 +80% 40V	C74	4000069	100 pF ±5% 63V
C26	4010041	10 nF -20 +80% 40V	C75	4000069	100 pF ±5% 63V
C27	4010041	10 nF -20 +80% 40V	C76	4000069	100 pF ±5% 63V
C28	4010041	10 nF -20 +80% 40V	C77	4000069	$100 \text{ pF} \pm 5\% 63 \text{V}$
C29	4010041	10 nF -20 +80% 40V	C78	4000069	100 pF ±5% 63V
C30	4010027	1 nF ±10% 100V	C79	4000069	100 pF ±5% 63V
C31	4010027	1 nF ±10% 100V	C80	4000069	100 pF ±5% 63V
C32	4010027	$1  \mathrm{nF} \pm 10\%  100 \mathrm{V}$	C81	4000069	100 pF ±5% 63V
C33	4010027	1 nF ±10% 100V	C82	4000069	100 pF ±5% 63V
C34	4000069	100 pF ±5% 63V	C85		22 μF -10 +50% 25V
C36	4201057	1 μF 35V	C86	4010041	10 nF -20 +80% 40V
C37	4010041	10 nF -20 +80% 40V	C88	4010041	10 nF -20 +80% 40V
C38	4010027	1 nF ±10% 100V	C94		100 nF -20 +100% 16V
C39	4010027		C95	4000075	12 pF ±2% 63V
C40	4010027	1 nF ±10% 100V	C97		12 pF ±2% 63V
C41	4010027	1 nF ±10% 100V	C98		10 nF -20 +80% 40V
C42	4010041	10 nF -20 +80% 40V		3020011	
C43	4010027	1 nF ±10% 100V			
C44	4010027	1 nF ±10% 100V			
C45	4010027	1 nF ±10% 100V			
C46	4010027				
C47	4010027				
	0000000	0367			
X1 X2	8090006 8090006				
-				******	
L1	8020342	10 μΗ			
L2	8020341				
	8020342	10 μΗ			
	00000040	10 μH			
L4	8020342	•			
L4 L7	8020342	10 μΗ			
L4 L7 L8	8020342 8020342	10 μH 10 μH			
L3 L4 L7 L8 L9 L10	8020342	10 μH 10 μH 10 μH			



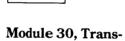
PC12, 8002496 **Terminal Trans**mitter





Module 22, Socket







former

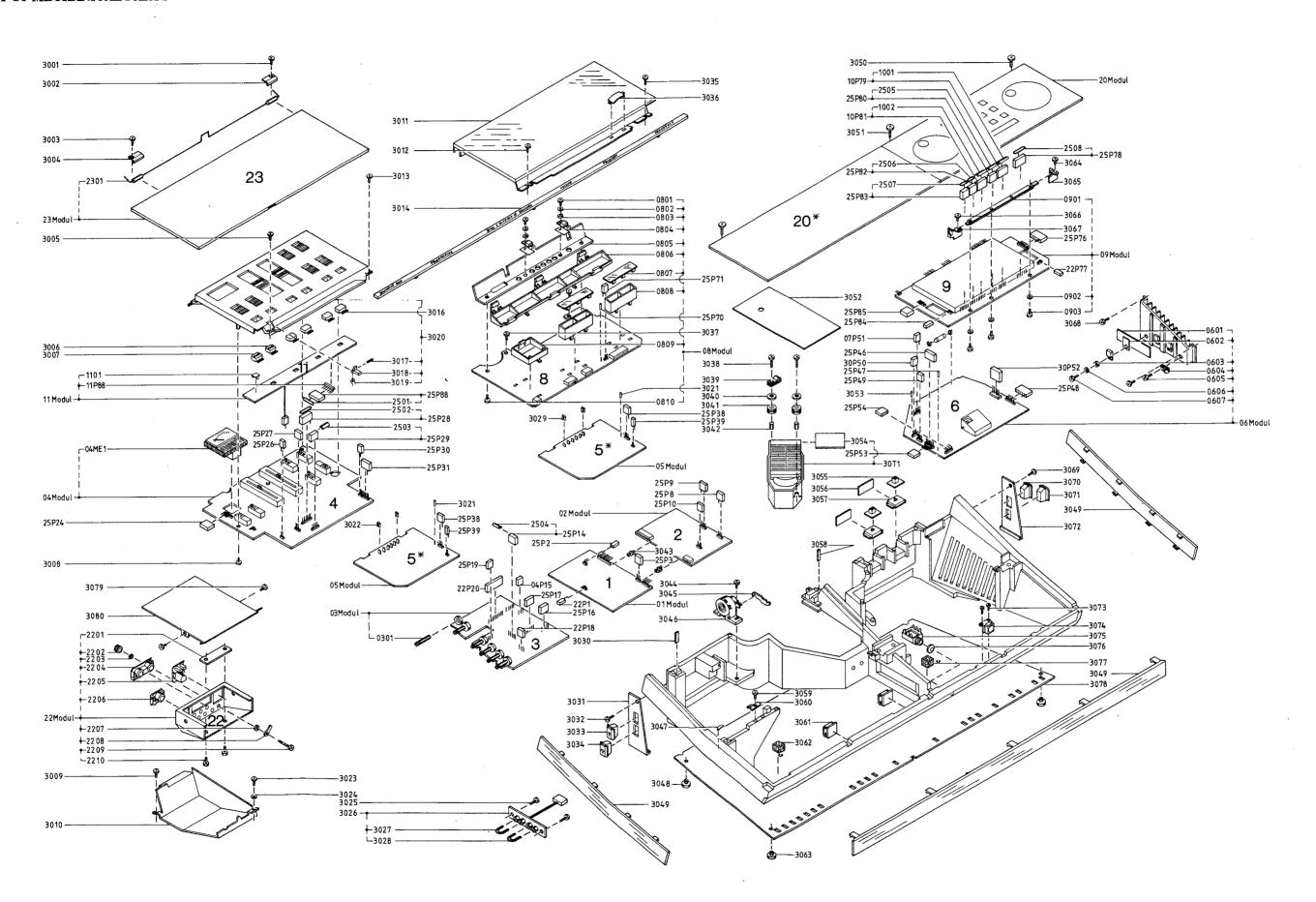
P72 P73 P74 P75	7220218	Plug 7 pins Plug 6 pins Plug 13 pins	P77 P84 P85	7220213 7220213 7220230 7500154	Plug 2 pins Plug 5 pins
P76	7220217	Plug 10 pins			
	7200044 7200045				
	3302344				
	3302345	Screen for µC bottom			
R1	5010064	2.2 kohms ±5% 1/8W			
R2	5001164	3.3 ohms $\pm 10\%$ 1/2W			
R3	5010040				
C1	4010024	470 pF ±10% 100V	C6	4010021	220 pF ±10% 100V
C2	4010024	$470  \text{pF} \pm 10\%  100 \text{V}$	C7	4010021	220 pF ±10% 100V
C5	4010021	220 pF ±10% 100V	C8	4010021	
X1	8030013	455 kHz			
 R1	5010058	470 ohms ±5% 1/8W			-
R2	5010058	470 ohms ±5% 1/8W			
C1	4011005	2.2 nF -20 +50%			
T1	8020341				
R1	5010362	180 ohms ±5% 1/8W			
R2	5010362	180 ohms ±5% 1/8W			
C1	4200409	10000 μF 63V			
C2	4200409	10000 μF 63V			
C3	4200409	10000 μF 63V			
C <b>4</b>	4200409	10000 μF 63V		•	







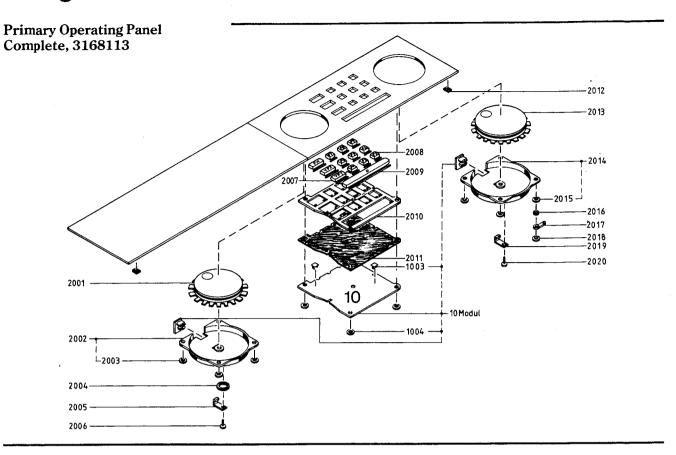
### MEKANISK STYKLISTE LIST OF MECHANICAL PARTS



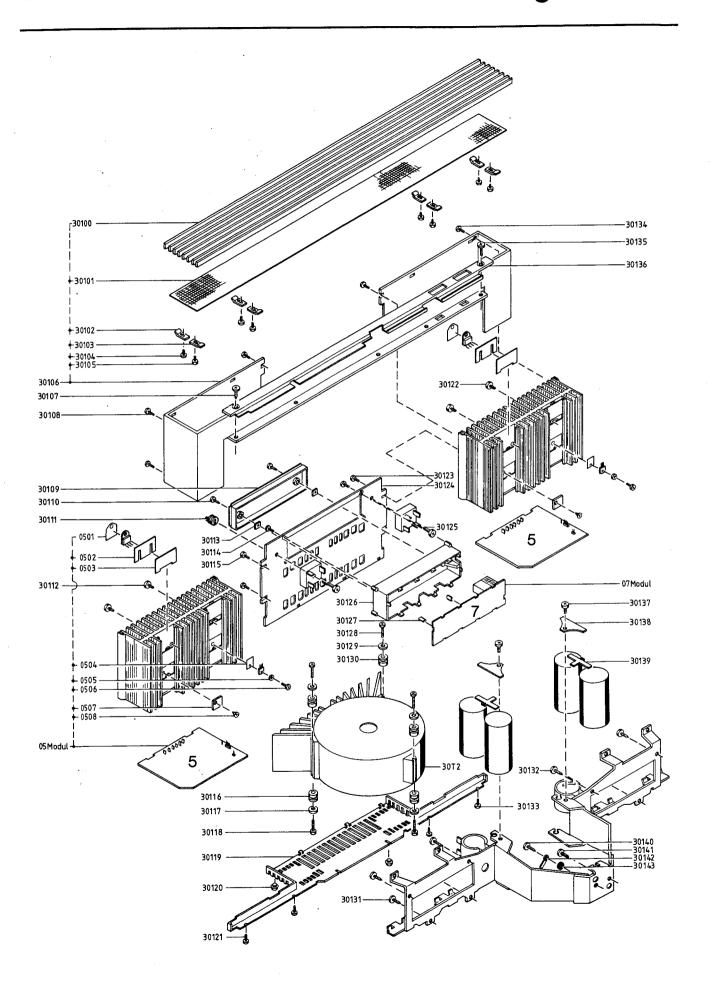
Main Chassis, Secondary Operating Panel

01Modul	8002416	PC, FM	01Modul	8002449	PC, FM type 1903
02Modul	8002398	PC, FM interface			
03Modul	8002399	PC, preamplifier	0301	2830087	Shaft
	8002403 8450044	PC, tone control Signal meter	04P15	6273912	Lead with socket
05Modul	8002404	PC, outputamplifier with heatsink			
06Modul	8002402	PC, power supply	0604	2515001	Wire holder
0601	3014056	Insulation	0605	2039027	Screw AM3 x 6
0602	2622248	Mica sheet	0606	2624032	Washer
0603	2938140	Bushing	0607	2039027	Screw AM3 x 6
07P51	6273898	Lead with socket			
08Modul	8002406	Display, assembled	0806	3015089	Holder
0801	2039035	Screw 3 x 8 black	0807	3320051	Window
0802	2624032		0808	3131178	Housing
0803	2938140	Bushing	0809	3015090	Holder
0804	2622248	Mica sheet	0810	2013099	Screw 2.8 x 6.5 black
0805	3358160	Heatsink			
00Modul	8002493	ΡC, μC	0902	2622014	Fibre washer
0901	2566047	, · ·	0903	2039026	
1001	7229025	Cap	10P79	6273888	
1002	7229025	Сар	10P81	6273888	Lead with socket
11Modul 1101	8002412 7500148	PC, secondary operation Contact spring	11P88	7220221	Plug 8/8 pole
20Modul	3168113	Primary operating panel		-	
0016 1 1	7010000	Contrat const	2206	7210221	Socket »PHON0«
22Modul 2201	7219028 3151203	Socket panel Wire holder	2207	2625002	Washer
2201	2382009	Milled nut	2208	7530082	Solder tag
2203	2380112	Nut	2209	2039034	Screw AM3 x 12 black
2204	7210179	Socket »TAPE«	2210	2039028	Screw AM3 x 8 black
2205	7210279	Socket »FM«			
0001	CO70000	T 4 id d 4	22P20	6273995	Lead with socket
22P1 22P18	6273993 6273994	Lead with socket Lead with socket	22P77	6273996	Lead with socket
23Modul	3162134	Cover for secondary operatio	n 2301	2819150	Spring with bearings
0503	0700050	0	9505	700004	Con
2501	2732056	O-ring	2505 2506	7229024 2732055	Cap O-ring
2502 2503	2732056 7229024	O-ring Cap	2506 2507	2732056	O-ring O-ring
2503 2504	7229024	Сар	2508	2732056	O-ring
		-			
25P2	6273992	P2/P84 with cable	25P24	6275437	P24/P38/P39/P54
25P3	6273906	P3/P26 with cable	25P26	6273906	P26/P3 with cable
25P8	6273896	P8/P49 with cable	25P27	6273986	P27/P16 with cabl€
25P9	6273892	P9/P85 with çable	25P28	6273890	P28/P83 with cabl€
25P10	6273987	P10/P19 with cable	25P29	6273891	P29/P80 with cable
25P14	6273901	P14/P82 with cable	25P30	6273915	P30/P71 with cable
25P16	6273986	P16/P27 with cable	25P31	6273989	P31/P53 with cable
25P17	6273988	P17/P46 with cable	25P38	6275437	P24/P38/P39/P54
25P19	6273987	P19/P10 with cable	25P39	6275437	P24/P38/P39/P54

2510131 2510131 2500147 2645032 3151187 2013080 2211047 2211047 2015065 2816174 2013080 2013106 2515001 2622024 2938125 2930084	Clamp Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black Screw 2.9 x 16 black Wire holder Washer Bushing Brass tube  Lead with socket	3066 3067 3068 3069 3070 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080	3030052 2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045 3947032 3454258 2039024 3112249	Hinge Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5 Holder Jack socket Nut Spacer Bottom plate Screw AM3 x 6 black Cover for socket panel Lead with socket
2510131 7500147 2645032 26151187 2013080 7211047 7211047 2015065 2816174 2013080 2013106 2515001 2622024 2938125	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black Screw 2.9 x 16 black Wire holder Washer Bushing	3067 3068 3069 3070 3071 3072 3073 3074 3075 3076 3077 3078 3079	2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045 3947032 3454258 2039024	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5 Holder Jack socket Nut Spacer Bottom plate Screw AM3 x 6 black
2510131 7500147 2645032 3151187 2013080 7211047 7211047 2015065 2816174 2013080 2013106 2515001 2622024	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black Screw 2.9 x 16 black Wire holder Washer	3067 3068 3069 3070 3071 3072 3073 3074 3075 3076 3077 3078	2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045 3947032 3454258	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5 Holder Jack socket Nut Spacer Bottom plate
2510131 2500147 2645032 3151187 2013080 2211047 2211047 2015065 2816174 2013080 2013106 2515001	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black Screw 2.9 x 16 black Wire holder	3067 3068 3069 3070 3071 3072 3073 3074 3075 3076 3077	2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045 3947032	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5 Holder Jack socket Nut Spacer
2510131 2500147 2645032 3151187 2013080 2211047 2211047 2015065 2816174 2013080 2013106	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black Screw 2.8 x 9.5 black	3067 3068 3069 3070 3071 3072 3073 3074 3075 3076	2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5 Holder Jack socket Nut
2510131 2500147 2645032 3151187 2013080 7211047 7211047 2015065 2816174 2013080	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring Screw 2.8 x 9.5 black	3067 3068 3069 3070 3071 3072 3073 3074 3075	2013099 2013080 7211047 7211047 3151186 2011005 3152289 7210151 2389045	Screw 2. 8 x 6.5 black Screw 2. 8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2. 2 x 9.5 Holder Jack socket Nut
2510131 7500147 2645032 3151187 2013080 7211047 7211047 2015065 2816174	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black Spring	3067 3068 3069 3070 3071 3072 3073 3074	2013099 2013080 7211047 7211047 3151186 2011005 3152289	Screw 2. 8 x 6.5 black Screw 2. 8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2. 2 x 9.5 Holder Jack socket
2510131 7500147 2645032 3151187 2013080 7211047 7211047 2015065	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Screw 3.5 x 12.7 black	3067 3068 3069 3070 3071 3072 3073	2013099 2013080 7211047 7211047 3151186 2011005	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5
2510131 7500147 2645032 3151187 2013080 7211047 7211047	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN	3067 3068 3069 3070 3071 3072	2013099 2013080 7211047 7211047 3151186 2011005	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket Screw 2.2 x 9.5
2510131 7500147 2645032 3151187 2013080 7211047 7211047	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN	3067 3068 3069 3070 3071 3072	2013099 2013080 7211047 7211047 3151186	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN Holder for socket
2510131 7500147 2645032 3151187 2013080 7211047	Socket Spacer Holder for socket Screw 2.8 x 9.5 black Socket 2-pole DIN	3067 3068 3069 3070 3071	2013099 2013080 7211047 7211047	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN Socket 2-pole DIN
2510131 7500147 2645032 3151187 2013080	Socket Spacer Holder for socket Screw 2.8 x 9.5 black	3067 3068 3069 3070	2013099 2013080 7211047	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black Socket 2-pole DIN
2510131 7500147 2645032 3151187	Socket Spacer Holder for socket	3067 3068 3069	2013099 2013080	Screw 2.8 x 6.5 black Screw 2.8 x 9.5 black
2510131 7500147 2645032	Socket Spacer	3067 3068	2013099	Screw 2.8 x 6.5 black
2510131 7500147	Socket	3067		_
2510131	•		2020000	11i
	C1		2013080	Screw 2.8 x 9.5 black
2010101	Clamp	3065	3030051	Hinge
210323	Ext. filter output	3064	2013080	Screw 2.8 x 9.5 black
2013080	Screw 2.8 x 9.5 black	3063	3035031	Rubber foot
2625002	Washer	3062	3947032	Spacer Dubb on foot
2013080	Screw 2.8 x 9.5 black	3061	2515033	Cable clamp
7500147	Socket	3060	2548171	Bracket Cable clamp
7500014	Contact bushing	3059	2013080	
168169	Panel with lock		2645032	Screw 2.8 x 9.5 black
2819151	Spring Penal with look	3057 3058		Spacer
8034043	_ · · ·	3056	7400230	Loudspeaker switch
2830071	rin Lock	3055 3056	3170187	Insulation plate
	Pin	305 <del>4</del> 3055	2775748	Button
2775728	Pushbutton	3054	3170146	Insulation
2568581	Profile	3053	7500014	Contact bushing
2013067	Screw 2.8 x 12.7 black	3052	3302335	Insulation plate
2015065	Screw 3.5 x 12.7 black	3051	2015065	Screw 3.5 x 12.7 black
3112243	Glass plate	3050	2015065	Screw 3.5 x 12.7 black
302304	Bracket		3413625	Cabinet, white
2013080	Screw 2.8 x 9.5 black		3413624	Cabinet, oak
2013099	Screw 2.8 x 6.5 black		3413623	Cabinet, rosewood
775747	Pushbutton »STORE«	3049	3413621	Cabinet, teak
775747	Pushbutton »STORE«	3048	3035031	Rubber foot
2013067	Screw 2.8 x 12.7 black	3047	2815008	Spring
3014054	Mounting hardware	3046	3130061	Damping system
2013067	Screw 2.8 x 12.7 black	3045	2851107	Arm
3014046	Mounting hardware	3044	2013080	Screw 2.8 x 9.5 black
2013067	Screw 2.8 x 12.7 black	3043	3152063	Holder
3273915	P71/P30 with cable	25188	0273894	P88/P78 with cable
273902				P85/P9 with cable
275437				P84/P2 with cable
				•
	•			P83/P28 with cable
	,			P82/P14 with cable
2072000				P80/P29 with cable
273902	•		6273893	P76/P48 with cable P78/P88 with cable
52' 52' 52' 52' 52'	73902 73893 73896 73989 75437 73902 73915	73902 P47/P70 with cable 73893 P48/P76 with cable 73896 P49/P8 with cable 73989 P53/P31 with cable 75437 P24/P38/P39/P54 73902 P70/P47 with cable 73915 P71/P30 with cable 13067 Screw 2.8 x 12.7 black	73893       P48/P76 with cable       25P80         73896       P49/P8 with cable       25P82         73989       P53/P31 with cable       25P83         75437       P24/P38/P39/P54       25P84         73902       P70/P47 with cable       25P85         73915       P71/P30 with cable       25P88         13067       Screw 2.8 x 12.7 black       3043	73902       P47/P70 with cable       25P78       6273894         73893       P48/P76 with cable       25P80       6273891         73896       P49/P8 with cable       25P82       6273901         73989       P53/P31 with cable       25P83       6273890         75437       P24/P38/P39/P54       25P84       6273992         73902       P70/P47 with cable       25P85       6273892         73915       P71/P30 with cable       25P88       6273894         13067       Screw 2.8 x 12.7 black       3043       3152063



10Modul 1003	8002400 7500148	PC, primary operation Contact spring	1004	2395034	Spire
2001	2794080	Wheel for volume	2011	3170184	Foil
2002	3130067	Housing for wheel	2012	2620078	Felt washer
2003	2395034	Spire	2013	2794079	Wheel for frequency
2004	2732056	O-ring	2014	3130067	Housing for wheel
2005	2568550	Adjustment rail	2015	2395034	Spire
2006	2011005	Screw 2.2 x 9.5	2016	2625002	Tooth-lock washer
2007	2775734	Set of buttons, large	2017	7530082	Solder tag
2008	2775735	Set of buttons, small	2018	2395034	Spire
2009	2775858	Button »0«	2019	2568550	Adjustment rail
2010	3014045	Holder	2020	2011005	Screw 2.2 x 9.5

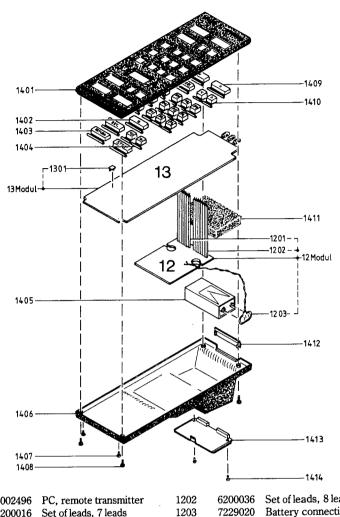


### LF Output and Cooling Tower

0501 0502	2622250 3014055	Output amplifier with heatsink Mica sheet Insulation	0504 0505 0506 0507	2622248 2622052 2039028 6140622	Mica sheet Fibre washer Screw AM3x8 black PC-board Screw AM3 x 6 black
0503	2816187	Plate	0508	2039024	Screw Aivio x o black
07Modul	8002407	PC, starting-up circuit 1901/1905	07Modul	8002425	PC, starting-up circuit 1903/1907
30100	3444121	Cooling grill	30124	3452343	Back plate 1901
30100	3911074	Fibre glass mesh		3452348	Back plate 1903
30102	3151183	Bracket		3452363	Back plate 1905
30102	3151183	Bracket		3452343	Back plate 1907
30104	2039020	Screw AM3 x 5 black	30125	2043021	Screw AM4 x 16 black
30105	2039020	Screw AM3 x 5 black	30126	3131184	Housing
30106	3358159	Cooling tower, complete	30127	7500147	Socket
30107	2015065	Screw 3.5 x 12.7 black	30128	2043900	Screw AM4 x 20
30108	2013080	Screw 2.8 x 9.5 black	30129	2622024	Washer
30109	3164377	Cover	30130	2938162	Spacer
30110	2013067	Screw 2.8 x 12.7 black	30131	2015065	Screw 3.5 x 12.7 black
30111	3034045	Wire holder	30132	2015065	Screw 3.5 x 12.7 black
30112	2043011	Screw AM4 x 8 black	30133	2013080	Screw 2.8 x 9.5 black
30113	2390020	Locking washer	30134	2013080	Screw 2.8 x 9.5 black
30114	2013080	Screw 2.8 x 9.5 black	30135	2015065	Screw 3.5 x 12.7 black
30115	2013080	Screw 2.8 x 9.5 black	30136	2560081	Decorative rail
30116	2938162	Spacer	30137	2043020	Screw AM4 x 6
30117	2622024	Washer	30138	2510128	Bracket
30118	2043900	Screw AM4 x 20	30139	7530077	Bracket
30119	3454263	Bottom	30140	2015065	Screw 3.5 x 12.7 black
30120	3035032	Rubber foot	30141	2015065	Screw 3.5 x 12.7 black
30121	2013080	Screw 2.8 x 9.5 black	30142	7330091	Solder tag
30122	2043011	Screw AM4 x 8 black	30143	2625003	Tooth-lock washer
30123	2013080	Screw 2.8 x 9.5 black			
30T2	8013250	Transformer type 1901, 220V		8013252	Transformer type 1905, 240V
	8013251	Transformer type 1903, 120V		8013253	Transformer type 1907, 110V/220V

### Beolab Terminal

## Bang&Olufsen



12Modul 1201	8002496 6200016	PC, remote transmitter Set of leads, 7 leads	1202 1203	6200036 7229020	Set of leads, 8 leads Battery connection
13Modul	8002492	PC, operation	1301	7500148	Contact spring
14Modul	8052142	Beolab terminal	1407	3010007	Stop
		complete	1408	2011023	Screw 2.2 x 6.5 black
1401	3164379	Cover	1409	2775736	Set of buttons, large, black
1402	2775761	Button »0«	1410	2775737	Set of buttons, small, black
1403	2775760	Set of buttons, large, blue	1411	3917036	Foam
1404	2775759	Set of buttons, small, blue	1412	3322058	Window
1405	8700008	Battery 9V	1413	3160031	Cover
1406	3454289	Bottom	1414	3010007	Stop
	3532148	Diagram		6270213	PU lead
	3391564	Outer carton		6270222	Signal lead
	3397418	Foam packing, bottom and		3391630	Packing for Beolab Terminal
		cover		3390001	Plastic bag for
	6271133	Mains lead with Euro socket			Beolab Terminal
	6100060 3917049	Mains lead for type 1903 Insert		7220252	Connector accessories

### Parts Not Shown

Cable Survey

Cable Pos. No.	Order No.	Length mm	Pin/Socket Ex. 1 6		Connection From   To	
			•	• • •		
25P2/P84	6273992	257	2	2	01P2	09P84
25P3/P26	6273906	342	4	3	01P3	04P26
25P8/P49	6273896	177	4	4	02P8	06P49
25P9/P85	6273892	170	5	5	02P9	09P85
25P10/P19	6273987	340	4	4	02P10	03P19
25P14/P82	6273901	492	· 5	5	03P14	09P82
25P16/P27	6273986	336	5	4	03P16	04P27
25P17/P46	6273988	439	6	7	03P17	06P46
25P28/P83	6273890	500	8	8	04P28	09P83
25P29/P80	6273891	530	6	6	04P29	09P80
25P30/P71	6273915	507	3	3	04P30	08P71
25P31/P53	6273989	450	6	5	04P31	06P53
25P47/P70	6273902	234	1	1	06P47	08P70
25P48/P76	6273893	185	10	10	06P48	09P76
25P78/P88	6273894	610	8	8	09P78	11P88
25P24/P39	6275437	705	6	2 2	04P24	05P39 05P39
25P38/P54	6275437	388	3 3	6	05P38 05P38	06P54

Survey of packings for module transport

Module No.	Designation	Packing No.	Remarks
01	FM	3391574	
02	FM interface	3391574	
03	Preamplifier	3391574	
04	Tone control	3391576	
05	Output amplifier	3391573	PC-board and heat-
			sink unfolded
06	Power supply	3391576	
07	Starting up circuit	3391574	
08	Display	3391575	
09	Micro-computer	3391575	
10	Keyboard primary	sample bag	
11	Keyboard secondary	sample bag	
12	Terminal transmitter	3391574	
13	Keyboard terminal	sample bag	

#### **GUIDE TO ADJUSTMENTS**

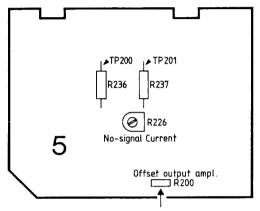
The following adjustments refer to some test points (TP). It is pointed out that in a number of receivers manufactured the test points are not shown in the component print of the PC-units.

In the cases where identical adjustments are to be made for the right-hand and the left-hand channels, the following applies: component nominations without brackets indicate the right-hand channel while component nominations in brackets refer to the left hand channel.

#### No-load current

The no-load current can be adjusted by means of a DC voltmeter as described in point 1, or by means of a milliammeter as described in point 2.

To both methods it applies that the no-load current adjustments are to be made while the receiver is in a cold state and with the volume control turned down. Loudspeakers must not be connected to the receiver.



1. Connect a millivoltmeter across the two emitter resistors 5R236 and 5R237 in TP200 and TP201.

Adjust with the potentiometer 5R226 until a reading of 18 mV is obtained.

2. Insert a milliammeter in series with the collector of 5IC203.

Adjust with the potentiometer 5R226 until a reading of 50 mA is obtained.

#### Offset output amplifier

Prior to making this adjustment the receiver must have been ON for at least 30 seconds.

The volume control **must** be fully turned down.

Connect a DC millivoltmeter to the loudspeaker output.

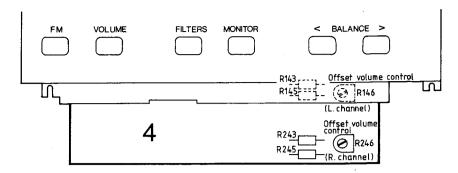
Adjust with the potentiometer 5R200 until a reading of 0V ( $\pm 5$  mV) is obtained.

#### Offset volume control

Switch on the receiver and turn down the volume control until the display shows »0.0«.

Connect an oscilloscope to the right-hand (left-hand) loudspeaker output. Switch off the X deflection, (\*Ext. X position\*). Set the Y input to the sensitivity of 5 mV/cm and in the DC mode. (If the trimmer is very much out of balance, it may be necessary to use a lower sensitivity at the start of this adjustment).

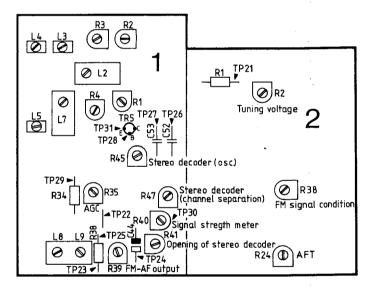
Now turn the volume forwards and backwards between »0.0« and »0.1«. Some DC jumps will appear on the scope screen and if they are sufficiently strong, they will also be audible as a crackling noise in the loudspeakers.



Adjust with the potentiometer 4R246 (4R146) until minimum DC jumps appear on the scope screen (<3 mV).

If the field of adjustment of the potentiometer is too narrow this is extendable by disconnecting the resistors 4R243 (4R143) or 4R245 (4R145). If it is necessary to turn the potentiometer further to the right than is possible, disconnect 4R245 (4R145). If it is necessary to turn the potentiometer further to the left than is possible, disconnect 4R243 (4R143).

NB: With a view to possible later adjustments the resistor should be disconnected by lifting the one feed line off the print. Place the resistor temporarily in such a way that there is no risk of short-circuiting other components.



Tuning voltage

Connect a DC voltmeter to 2TP21.

Tuner (Front-end) and IF section

Adjust with the potentiometer 2R2 until a reading of 3.0V is obtained.

Tuner (Front-end)/IF

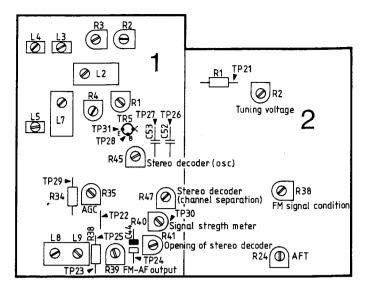
Set the receiver in the »Manual Tune « mode and set it to 87.5 MHz.

Connect a sweep generator to the aerial input and set the receiver to 87.5 MHz.

Connect an oscilloscope to 1TP22 via an RC-probe.

Adjust with 1L2, 1L3, 1L4, 1L5, and 1L7 for maximum and symmetrical IF curve (repeat this procedure, if necessary).

Now set the receiver and the sweep generator to 108 MHz. Adjust with the potentiometers 1R1, 1R2, 1R3 and 1R4 for maximum and symmetrical IF curve.



Detector

A distortion meter is required in order to make a correct adjustment of the detector, as described in point 1. If a distortion meter is not available, it is possible to make a fairly good adjustment by following the procedure described in point 2.

1. Connect a signal generator to the aerial input.

Connect a distortion meter to the loudspeaker output.

Connect a DC voltmeter between 1TP23 and 1TP25.

Adjust with 1L8 until minimum distortion is measured. Then adjust with 1L9 until a reading of 0V is obtained.

Repeat both adjustments until they are OK.

2. Make the adjustment by means of the »S curve «, but it will always be uncertain whether the receiver is within its distortion data.

Set the receiver to, e.g. 94 MHz.

Connect a sweep generator to the aerial input and set it to the same frequency as the receiver.

Connect an oscilloscope to 1TP24 and insert a DC voltmeter between 1TP23 and 1TP25.

Adjust with 1L8 and 1L9 for maximum and symmetrical S curve.

Then adjust with 1L9 until a reading of 0V is obtained.

NB: When the adjustments of the tuner/IF and the detector have been finished it is necessary to check the following, if the receiver is to be used in a geographical area where transmitter frequencies outside the 100 kHz grid can be received (i.e. transmitter frequencies not dividable by 100 kHz):

Set the receiver to the relevant transmitter station which is outside the 100 kHz grid.

Set the receiver in the »Aut. Tune« mode.

Check if the last two digits in the frequency display are flickering between two digits. If so, adjust with the potentiometer 2R24 until the last digit stays stable. If 2R24 is turned clockwise (as seen from the component side), the number is rounded off to the next higher one, and if 2R24 is turned anti-clockwise, the number is rounded off to the next lower one.

#### FM-AF output

Connect a signal generator to the aerial input and set it to, e.g. 94 MHz and to yield 1 mV EMF,  $\Delta \pm 75$  kHz.

Set the receiver to the same frequency as the signal generator.

Connect an AC voltmeter to 1TP26.

Adjust with the potentiometer 1R39 until a reading of 0.7 V is obtained.

#### **AGC**

Connect a signal generator to the aerial input, and set ti to, e.g. 94 MHz and to yield 1 mV EMF,  $\Delta\pm75$  kHz.

Set the receiver to the same frequency as the signal generator.

Connect a DC voltmeter to 1TP29.

Adjust with the potentiometer 1R35 until a reading of 3.5 V ( $\pm 0.2$  V) is obtained.

#### Signal strength meter

Connect a signal generator to the aerial input, and set it to, e.g. 94 MHz and to yield 1 mV EMF,  $\Delta\pm75$  kHz.

Set the receiver to the same frequency as the signal generator.

Connect a DC voltmeter to 1TP30

Adjust with the potentiometer 1R40 until a reading of 2.0 V is obtained.

#### Opening of stereo decoder

Connect a signal generator to the aerial input, and set it to, e.g. 94 MHz and to yield 25  $\mu V$  EMF,  $\Delta\pm75$  kHz.

Set the receiver to the same frequency as the signal generator.

Connect a DC voltmeter to 1TP28.

Adjust with the potentiometer 1R41 until a reading of 0.6 V is obtained.

NB: The channel separation must be  $10 \, dB \, (\pm 2 \, dB)$ .

#### Stereo decoder

#### Oscillator

In order to make this adjustment in a correct way the following instruments are required as described in point 1: a frequency counter or a Bang & Olufsen voltmeter RV11 and a frequency probe PF5. IF these instruments are not available, a fairly good adjustment is possible by following the procedure described in point 2.

1. Solder a 220 kohm resistor onto the plug P6 (the male part) from pin 6 to pin 5 (co-ordinate B1).

Set the receiver to a mono station.

Connect a frequency counter (or RV11/PF5) to TP31.

Adjust with the potentiometer 1R45 until a reading of 19 kHz ( $\pm 50$  Hz) is obtained.

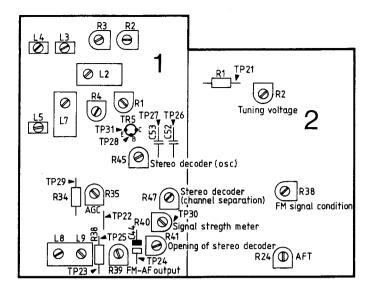
After the adjustment is finished, remove the soldered-on resistor.

2. Solder a 220 kohm resistor onto the plug P6 (the male part) from pin  $\delta$  to pin 5 (co-ordinate B1).

Set the receiver to a stereo station.

Turn the potentiometer 1R45 anti-clockwise (as seen from the component side) until the stereo effect just ceases to be heard. Then turn 1R45 clockwise until the stereo effect just ceases to be heard. Now adjust 1R45 exactly between the two positions and an approximately correct adjustment has been achieved.

After the adjustment is finished, remove the soldered-on resistor.



Channel separation

Connect a stereo (incoder) to the aerial input.

Connect a wattmeter or an AC voltmeter to the loudspeaker output.

Adjust with the potentiometer 1R47 until minimum signal is obtained in the non-modulated channel.

AFT (Automatic Fine Tuning)

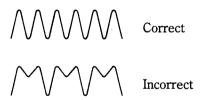
In order to be able to make this adjustment correctly it is a requirement that the tuner/IF and detector adjustments are perfect.

Connect a signal generator to the aerial input, and set it to, e.g. 94 MHz and to yield 1 mV EMF  $\Delta\pm75$  kHz.

Set the receiver to the same frequency as the signal generator and in the »Aut. Tune« mode.

Connect an oscilloscope to 1TP22.

Adjust with the potentiometer 2R24 until at least two harmonics of the signal are obtained, as shown in the curve.



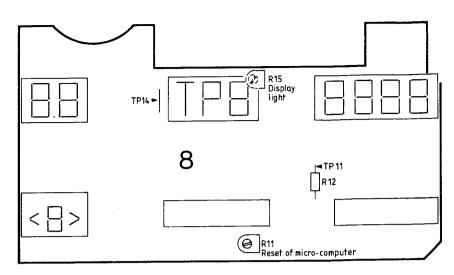
FM signal condition

Connect a signal generator to the aerial input, and set it to, e.g. 94 MHz and to yield 10  $\mu$ V EMF  $\Delta\pm75$  kHz.

Set the receiver to the same frequency as the signal generator and in the »Aut. Tune« mode.

Adjust with the potentiometer 2R38 until the point where the signal just cuts in.

NB: 2R38 is accessible from the bottom of the receiver, and consequently is easy to re-adjust, should local receiving conditions or customer's requirements make this desirable.



#### Resetting of microcomputer

Switch the receiver ON at a random programme.

Connect a DC voltmeter to 8TP11.

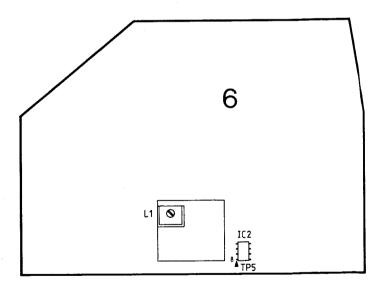
Adjust with the potentiometer 8R11 until a reading of 6.5 V ( $\pm 100~\text{mV})$  is obtained.

#### Display light

Switch the receiver ON at a random programme.

Connect a DC voltmeter to 8TP14.

Adjust with the potentiometer 8R15 until a reading of 5.0 V is obtained.



#### Remote control receiver

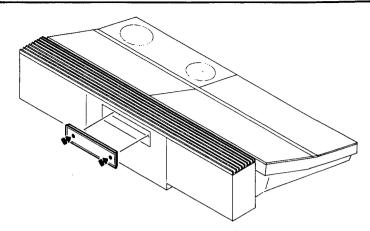
Connect an ocsilloscope to 6TP5.

Activate a random button on the Beolab Terminal, while holding it indirectly or at some distance from the receiver to avoid overdriving of 6IC1.

Adjust with 6L1 until max. signal is obtained.

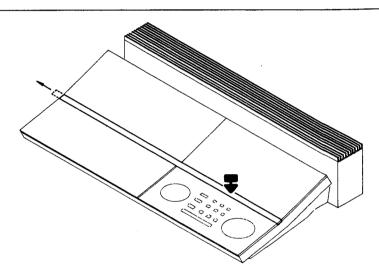
#### DISMANTLING

Replacement of mains fuses



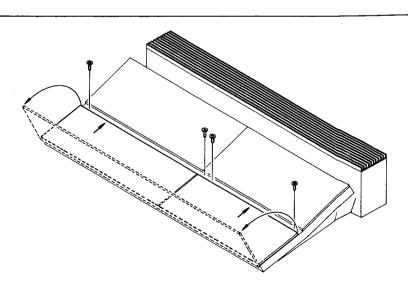
Remove the screws shown and pull-out the cover panel.

#### Removal of release rail



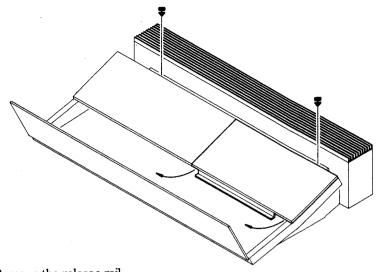
Push-down on the release rail at »Program« while simultaneously pushing the rail to the left.

### Dismantling of the primary operating panel



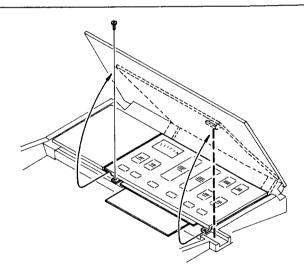
- 1. Remove the release rail.
- 2. Remove the screws shown and push the panel inwards. It can now be lifted into servicing position as shown.

### Removal of the glass dust cover



- 1. Remove the release rail.
- 2. Put the primary operating panel into servicing position.
- 3. Loosen the 2 cooling tower screws, as shown. Lift the front edge of the glass dust cover upwards while simultaneously pulling it outwards.

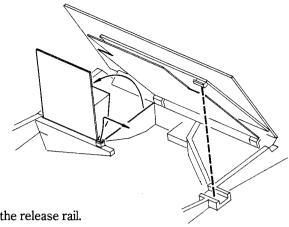
### Dismantling of the secondary operating panel



- 1. Remove the release rail.
- 2. Put the primary operating panel into servicing position.
- 3. Remove the screw shown while simultaneously pulling-out and lifting  ${\bf t}$ he panel upwards.

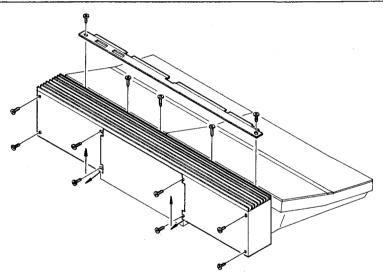
The panel can be put into servicing position by placing a screwdriver or something similar in the position indicated by the bold dash line.

### Dismantling of socket panel



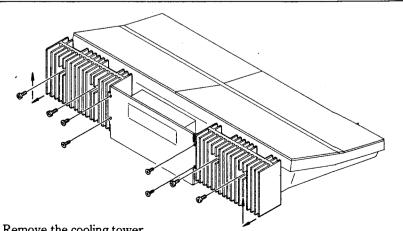
- 1. Remove the release rail.
- 2. Put the primary and secondary operating panels into servicing position.
- 3. Lift the socket panel upwards while simultaneously pushing to the right.

### Removal of the cooling tower



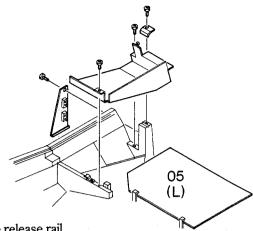
- 1. Remove the trim rail and the screws as shown.
- 2. Pull the cooling tower rearwards at the right and left sides while simultaneously pushing it upwards.

#### Removal of the right-hand and left-hand heat sinks



- 1. Remove the cooling tower.
- 2. Remove the screws shown. Pull rearwards at the bottom of the heat sink while simultaneously pushing it upwards.

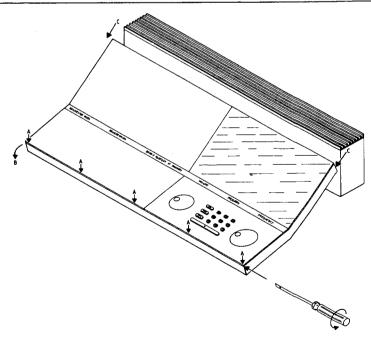
Removal of the left-hand output amplifier



- 1. Remove the release rail.
- 2. Put the primary operating panel into servicing position and remove the secondary operating panel.
- 3. Remove the socket panel.
- 4. Remove the cover and hinge shown, and remove the angle bracket with the loudspeaker sockets (left-hand channel) from the chassis.
- 5. Remove all plugs from PC5 and release the printed circuit board from the retainer fingers.

Pull PC5 towards the front of the receiver and turn it  $90^{\circ}$  clockwise (in the horizontal plane). PC5 can now be pulled rearwards free of the receiver.

### Removal of the cabinet panels



When removing the cabinet panels, the front panel must be removed first and for re-fitting it must be put back on as the last one.

Twist, by means of a fine screwdriver, the top edge of the front panel forwards at the 5 locking fingers indicated by the arrows »A«. The front panel can row be tilted forwards and removed.

- 1. Remove the cabinet front panel.
- 2. The side panels can now be pushed towards the front edge of the receiver and removed.

The front panel

The side panels

### Replacement of the mains transformer 30T2

- 1. Remove the cooling tower.
- 2. Remove the rear base plate under the cooling tower.
- 3. Remove the rear plate onto which the receiver serial number label is affixed, and release PC7 (Starting Up Circuit) from the rear plate.
- 4. Remove the two rectifier diodes on the rear plate.
- 5. Solder off the wires from the mains transformer on the electrolytic capacitors, the rectifier diodes and on PC7.
- 6. Remove the 3 top and the 3 bottom transformer fixing screws and pull the transformer rearwards.
- N.B.: When re-fitting the transformer the 3 top fixing screws must be fitted first in order not to ruin the elasticity of the suspension.

TECHNICAL SPECIFICATIONS	BEOMASTER 8000
Type no.	1901-1903-1905-1907
Amplifier section, standard for measurements (AF)	IHF A-202
Continuous power output per channel	150 watts at 4 ohms
Continuous power output per channel	100 watts at 8 ohms
Rated bandwidth	20-20,000 Hz
Total harmonic distortion	<0.05%
Dynamic headroom	2 dB/4 ohms, 1 dB/8 ohms
IHF intermodulation	<0.1%
Response vs frequency:	
Phono (excl. filter)	20-20,000 Hz ±0.5 dB
Tape	20-20,000 Hz +0 -0.5 dB
Wideband damping factor	>65
Input sensitivity/impedance:	
Phono	0.18 mV - 0.4 mV/47 kohms
Tape	23 mV - 170 mV/470 kohms
Line	500 mV/10 kohms
Overload level:	
Phono	55 mV - 125 mV
Tape	7 V
Signal-to-noise ratio:	
A-weighted phono	>75 dB
A-weighted tape	>77 dB
Channel separation	>55 dB
Output:	
Tape DIN 5 pin	115 mV/100 kohms
Таре	575 mV/4.7 kohms
Line	500 mV/1 kohms
Headphones	Max. 16 V/200 ohms
Bass control at 40 Hz	. ±10 dB
Treble control at 12.500 Hz	±10 dB
Filter 1 cutoff frequency	7000 Hz/12 dB/octave
Filter 2 cutoff frequency	10,000 Hz/6 dB/octave
FM tuner section, standard for measurements (RF)	IHF T-200
FM range	87.5 - 108 MHz
FM aerial impedance	75 and 240 ohms
Usable sensitivity mono	13 dBf - 1.2 μV/75 ohms
Usable sensitivity stereo with automatic channel blend	15 dBf - 1.5 μV/75 ohms
50 dB quiting sensitivity mono	19 dBf - 2.5 μV/75 ohms
50 dB quiting sensitivity stereo with automatic	
channel blend	34 dBf - 14 μV/75 ohms
Signal-to-noise ratio at 65 dBf mono	>76 dB
Signal-to-noise ratio at 65 dBf stereo	>72 dB
Frequency response	20-15.000 Hz ±1 dB
Distortion at 65 dBf mono	<0.1%
Distortion at 65 dBf stereo	<0.1%
Intermodulation distortion mono	<0.05%
Intermodulation distortion stereo	<0.1%
Capture ratio	<1.8 dB
Adjacent channel selectivity	>10 dB
Alternate channel selectivity	>65 dB
Spurious response	>110 dB
Image response ratio	>86 dB
IF response ratio	>120 dB
AMsuppression	>63 dB
Stereo channel separation 100-10,000 Hz	>40 dB
Subcarrier product rejection	>72 dB

Other data:	
Power supply	type 1901 220 volts
	type 1903 120 volts
	type 1905 240 volts
	type 1907 110 volts
Power frequency	50-60 Hz
Power consumption	10-700 watts
Dimensions W x H x D	67 x 15 x 37 cm 26 3/8" x 6" x 14 1/2"
Weight	21 kg 46.3 lbs
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#### **INSULATION TEST**

Each set **must** be insulation tested after dismantling. The test is to be performed when the set has been re-assembled and is ready for delivery to the customer.

Insulation test for Beomaster 8000

Make the insulation test as follows: – Short-circuit the two plug pins of the mains plug and connect one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the chassis pin of the headphone socket.

#### N.B.!

To avoid tuining the set, it is essential that both insulator test terminals are in really good mechanical contact.

Now turn slowly the voltage control of the insulation tester until a voltage of  $1.5-2\,\mathrm{kV}$  is obtained. Hold it there for 1 second, then turn slowly the voltage down again.

At no point during the testing procedure any flash-overs are permissible.

### 10-1

## Bang&Olufsen

**FINAL TESTING** 

By following the below testing procedure it can be checked whether the

mechanical and electrical functions are in working order.

This testing can be made without the use of test instruments.

Testing procedure

Prior to the testing, set »Loudn. «, »Filter 1« and »Filter 2« in the OFF position. Set the woof and tweet controls in the neutral positions.

Check Point	Comments		
1) Connect: 4 loudspeakers GR 8000 to PHONO BE 8000 to TAPE 1 Another BE to TAPE 2	Check all sockets mechanically.		
2) Connect mains voltage	Light in ST.BY indicator.		
3) Check µC test programme*	»TP« in program display if test is OK.		
4) P1	<ul><li>»P1« in program display.</li><li>»3.0« in volume display.</li><li>»Blank« balance display.</li><li>Random frequency in frequency display.</li></ul>		
5) SPEAKER SWITCHES	With receiver in position MAN. TUNE adjust to FM noise. Same level in right and left channel. Check speaker 1 and speaker 2 switch.		
6) Headphone socket			
7) Keyboard P2 – P9.	»P2« – »P9« in program display.		
8) PH	GR 8000 starts when activating »PH«. »PH« in program display. Check replay function.		
9) TP1	BE 8000 starts when activating »TP1«. »TP1« in program display. Check record/replay function.		
10) TP2	Check record/replay function.		
11) FM TUNING CONTROL	With receiver in position MAN. TUNE tune through the FM band. Check upper and lower band limit (87,5 – 108 MHz). Program display shows frequencies in »STORE« with program number. (»Px«).		
12) VOLUME CONTROL	Smooth up/down regulation of sound.  Must be checked min. between »0.0« and »3.0«. (Slight sound at »0.0« is acceptable). Check display from »0.0« to »6.0«. Above 3.0 the check can be made with speakers switched off.		
13) BALANCE CONTROL	Check display in all positions.  Muting in extreme positions.		
14) »STORE« VOL and FM	<ul> <li>a. Adjust to e.g. VOL »3.0« BAL »&lt;1« FM »100.0«</li> <li>b. »STORE« VOL and FM (e.g. P1).</li> <li>c. Set VOL and FM to other values.</li> <li>d. Go to ST.BY with »0«</li> <li>e. Switch on again with »0«.</li> <li>f. Same values as before switching off must appear in display.</li> <li>g. Go to ST.BY with »0«.</li> <li>h. Switch on again with »P1«.</li> <li>i. »STORE« values must appear in display.</li> </ul>		

Check Point	Comments		
15) AUT. TUNE/MAN. TUNE	<ul><li>a. In position MAN. TUNE light in »MANUAL« in display.</li><li>b. In position AUT. TUNE Silent tuning between stations.</li><li>c. Check automatic frequency control functions.</li></ul>		
16) SIGNAL-MULTIPATH METER	<ul><li>a. Deflection on stations.</li><li>b. Must not stick.</li><li>c. MPX lights on stereo stations.</li></ul>		
17) SIGNAL-M. PATH SWITCH	No meter deflection difference with OK aerial signal.		
18) FILTERS	<ul><li>a. With »FILTERS« on, »FILTERS« must light in display.</li><li>b. With tone controls in max. check that »FILTERS« OFF cancels the tone control.</li></ul>		
19) BASS/TREBLE FILTER 1/FILTER 2 LOUDNESS	Check with »FILTERS« ON.		
20) STEREO/MONO SWITCH	<ul><li>a. »MONO« lights in display in position MONO.</li><li>b. Right and left channel added.</li></ul>		
21) MONITOR	»TP1« flashes in program display.		
22) CLIPPING	<ul><li>a. Set receiver to FM noise.</li><li>b. Switch off speakers.</li><li>c. With max. volume »CLIPPING« must flash/light in display with balance control in both right and left extreme position.</li></ul>		
23) Tapping noise	Switch to TAPE 2 and connect loudspeaker. At »non-destructive« tapping on the set, no noise must be heard in the loudspeakers.		
24) Remote receiver	Check ON/OFF, VOL^/VOL∨, PH and TP1.		
25) Set all controls to neutral positions	AUT. TUNE SIGNAL FILTERS: OFF BASS/TREBLE: 0 FILTER 1/2: OFF STEREO LOUDN: OFF BAL: 0 VOL: 3.0		
26) Lid for secondary operating panel	Smooth opening must not »bounce« in top position.		
27) All operating buttons	Test all operating buttons for their proper mechanical function.		

<sup>\*</sup>The integral test program of the microcomputer is activated as follows:

- 1. Set the receiver in position »Stand by «.
- 2. Activate the »Monitor«-button simultaneously with the »Stand by«-button.

If the microcomputer is in working order, the program display will read »TP« (Test Passed). If on the other hand, an error is present, the display will read »TE« (Test Error) while the frequency display will show a number which indicates the location of the error, cf. the diagram page 10-3.

If further information is required regarding the microcomputer and the test programme, reference is made to Technical Product Information for Beomaster 8000, Beolab Terminal.

TE	Defect IC	or short IC pin to chassis		
1	9IC3 (RAM)			
2	9IC3 (ROM)	3**		
3	9IC3	31		
4	9IC3	4** - 25 - 27 - 28 - 29		
5	9IC3	19 - (17 - 18 - 19 - 20)** - (15 - 16)***		
6	9IC3	6 - 7 - 8 - 9 - (2 - 5)**		
7	9IC4 (RAM)			
8	9IC4 (RAM)	10 - 11		
9	9IC4 (ROM)			
10	9IC4	31 - 32 - 33 - 34 - 35 - 36 - 37 - 38		
11	9IC4	22 - 23 - 24 - 25 - 26 - 27 - 28 - 29		
12	9IC4	14 - 15 - 16 - 17 - 18 - 19 - 20		
13	9IC4	6-8-9		

<sup>\*\*</sup> Due to the fact that these IC pins are the control leads for the display, the display will show wrongly if this is where the error is located.

<sup>\*\*\*</sup> Is testable only by short-circuiting the contact pin »Test Prg. « (pin 40 of 9IC3) to chassis on PC9 (co-ordinate E2).

SERVICE TIPS AND MODIFICATIONS

Method to locate fault in the FM tuning system

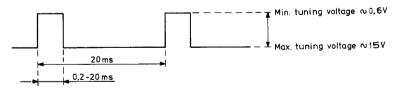
It may be difficult to decide whether a fault in the FM tuning system must be looked for somewhere around the »Pulse Height Modulator « and »Integrator « circuits or the »Counter « circuit (9IC5, 9IC8) and the microcomputer (9IC4). When in doubt, use the following method:

- 1. Preparations prior to an examination of the tuning system.
- A. Dismantle the socket of P84 on PC9 (co-ordinate A3).
- B. Cut the connection throught pin 4 of P85 on PC9 (co-ordinate A2).

N.B.! The easiest way of cutting the connection through pin 4 of P85 is to dismantle the female socket and to bend the plug pin down against the printed circuit board and subsequently to remount the female socket.

- C. Connect an oscilloscope to pin 1 of 2IC1 (co-ordinate A1).
- D. Connect a DC voltmeter to the collector of 2TR1 (co-ordinate A1).
- E. Connect an FM signal generator to the male plug P84 on PC9, and set it at, e.g. 110.7 MHz and to generate  $>50\mu V$ , EMF.
- 2. Control of the counter function of the microcomputer.
- A. Set the receiver in »Aut. Tune « mode.

  The frequency display of the receiver will now show a frequency that is
  10.7 MHz below the generator frequency, i.e. 100 MHz. If this is the case,
  the counter function of the microcomputer is OK.
- 3. Control of the »Pulse Height Modulator« and »Integrator« circuits.
- A. Now set the receiver in »Man. Tune « mode. (Input the frequency displayed as a reference frequency in the RAM of the microcomputer).
- B. Vary the generator frequency by means of the frequency control of the signal generator. Settings to higher frequencies will by the microcomputer be interpreted as oscillator drift towards a higher frequency and that will result in corrective pulses from pin 24 of 9IC4 (FM down). On the scope this will result in positive pulses (Lower frequency = negative pulses).



N.B.! Small »Detuning« = short pulse time.

If an explanation of the functioning of the FM tuning system is required, reference is made to Technical Product Information for Beomaster 8000, Beolab Terminal.

### 11-2

### To be remembered when replacing 9IC6

## Bang&Olufsen

When replacing 9IC6 (Non Volatile Memory) all 9 preset FM programmes **should** be programmed (Store) with a random frequency (e.g. 87.5 MHz) prior to handing over the receiver to the customer.

This is needed for the following reason: in the new IC some values may be stored which do not correspond to the stations between 87.5 and 108 MHz. In the receiver this will have the following consequence: when adjusting to a station the P in the program display will light-up as it should, but after a short while it will go out again even though the receiver is still tuned in on the station.

MODIFICATIONS
Re the »Spike Suppression«
circuit on PC4

In receivers from and including Serial No. 2322001 the »Spike Suppression« circuit on PC4 has been removed.

Re PC9 (Microcomputer)

Diagram 2 with the »Spike Suppression« circuit is shown on page 11-5.

In the current production PC9 (Microcomputer) will be modified to a new version which has the index No. 8002493.

The two versions are fully compatible.

Diagram 3 with the earlier version of PC9 is shown on page 11-6.

Table of Input/Output levels (Monitor function of »Tape 1«)

As it will appear from the table, the »Monitor  $\circ$  function is effected via »Tape  $1 \circ$ .

		DIN sockets		RCA phono plugs	
		IHF measurements	DIN measurements	IHF measurements	DIN measurements
PHONO Record player	Sensitivity/ impedance	0.23 mV/47 kohms adjustable 0.18 mV-0.4 mV	2 mV/47 kohms adjustable 1.6 mV-3.6 mV	0.23 mV/47 kohms adjustable 0.18 mV-0.4 mV	2 mV/47 kohms adjustable 1.6 mV-3.6 mV
	Overload level	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV
TAPE 1 Beocord 8000 7 pin	Input sensitivity	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V
or MONITOR	Overload level	7 V	7 V	7 V	7 V
RCA phono plugs	Output	575 mV/4.7 kohms	750 mV/4.7 kohms at FM ±40 kHz.	575 mV/4.7 kohms	$750 \mathrm{mV/4.7} \mathrm{kohms}$ at FM $\pm 40 \mathrm{kHz}$ .
	,		235 mV/4.7 kohms at FM ±12.5 kHz		$235 \mathrm{mV/4.7}$ kohms at FM $\pm 12.5$ kHz
TAPE 2 5 pin DIN	Input sensitivity	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V		
	Overload level	7 V	7 V		
C	Output	115 mV/100 kohms	150 mV/100 kohms at FM ±40 kHz.		
		. :	45 mV/100 kohms at FM ±12.5 kHz.		
LINE	Input			25 mV/10 kohms	500 mV/10 kohms
IN-OUT external	Output			575 mV/1 kohms	700 mV/1 kohms at FM ±40 kHz
unit					$235 \mathrm{mV/1}$ kohms at FM $\pm 12.5$ kHz.

N.B.! At some time in the current production the »Monitor« function will be trans ferred from »Tape 1« to »Tape 2«. Then the table on page 11-4 will apply.

### 11-4

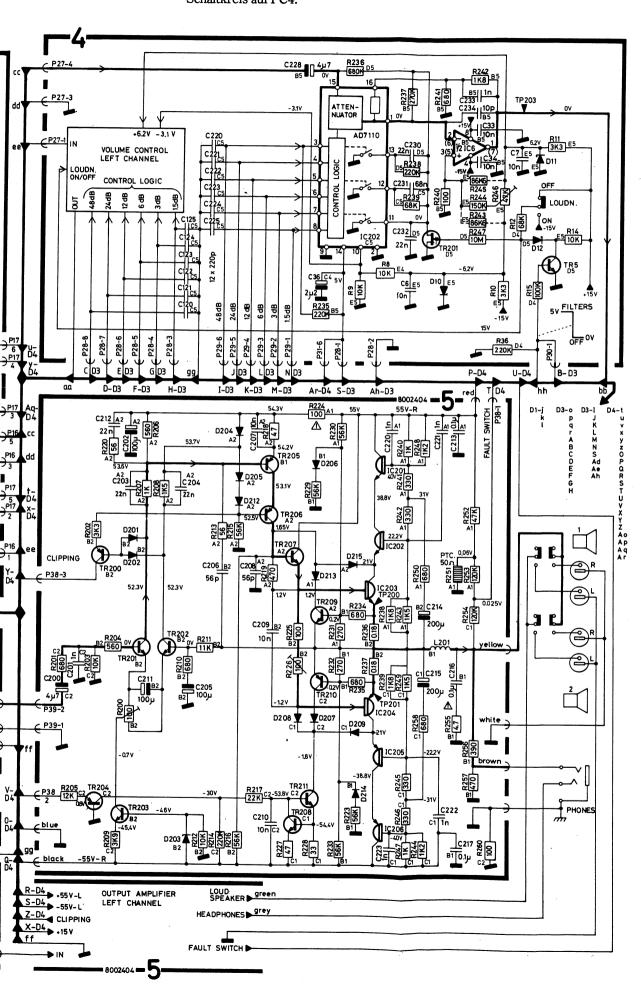
## Bang&Olufsen

### Table of Input/Output levels (Monitor function of »Tape 2«)

	VI	DIN sockets		RCA phono plugs	
		IHF measurements	DIN measurements	IHF measurements	DIN measurements
PHONO Record player	Sensitivity/ impedance	0.23 mV/47 kohms adjustable 0.18 mV-0.4 mV	2 mV/47 kohms adjustable 1.6-3.6 mV	0.23 mV/47 kohms adjustable 0.18 mV-0.4 mV	2 mV/47 kohms adjustable 1.6-3.6 mV
	Overload level	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV	70 mV adjustable 55 mV-125 mV
TAPE 1 Beocord 8000 7 pin	Input sensitivity	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V		
	Overload level	7 V	7 V		
	Output	575 mV/4.7 kohms	750 mV/4.7 kohms at FM ±40 kHz.		
			235 mV/4.7 kohms at FM ±12.5 kHz		
TAPE 2 MONITOR 5 pin DIN	Input sensitivity	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V	23 mV/470 kohms adjustable 23 mV-170 mV	200 mV/470 kohms adjustable 200 mV-1.5 V
or RCA phono plugs	Overload level	7 V	7 V	7 V	7 V
	Output	115 mV/100 kohms	150 mV/100 kohms at FM ±40 kHz.	575 mV/4.7 kohms	$750 \mathrm{mV/4.7}$ kohms at FM $\pm 40 \mathrm{kHz}$ .
			$45 \text{ mV}/100 \text{ kohms}$ at FM $\pm 12.5 \text{ kHz}$ .		$235 \mathrm{mV/4.7}$ kohms at FM $\pm 12.5$ kHz.
LINE	Input			25 mV/10 kohms	500 mV/10 kohms
IN-OUT external	Output			575 mV/1 kohms	$700\mathrm{mV/1}$ kohms at FM $\pm 40\mathrm{kHz}$
unit					$235 \text{ mV/1 kohms}$ at FM $\pm 12.5 \text{ kHz}$

### Table of cables

	Beomaster 8000	Beocord 8000	Beogram 8000
	For Beocord 8000: TP 1, 6270222 7 pins (4 signals, 2 data link) For Beogram 8000: PH, 6270213 7 pins (2 signals, 2 data link)	For other Beomaster's, or other receivers with DIN socket: 0961014  5 pins DIN standard (4 signals)	For other Beomaster's, or other receivers with DIN socket: 6270204 5 pins DIN standard (2 signals)
Cables as extra accessories		For receivers with RCA phono plugs: 6270215 (2 x 2 signals)	For receivers with RCA phono plugs: 6270216 (2 signals)



revious version of PC9, rocomputer).

Inthält die frühere Version der PC9, 8002401 (Microcomputer).

